

NE 15TH/16TH STREET CORRIDOR

Bellevue City Council
October 25, 2010



Tonight's Agenda:

Review:

- Significant changes within the corridor since adopting the Bel-Red Comprehensive Plan

Present:

- Variables relating to cross-sections & tradeoffs
- Estimated costs for the major segments and variables

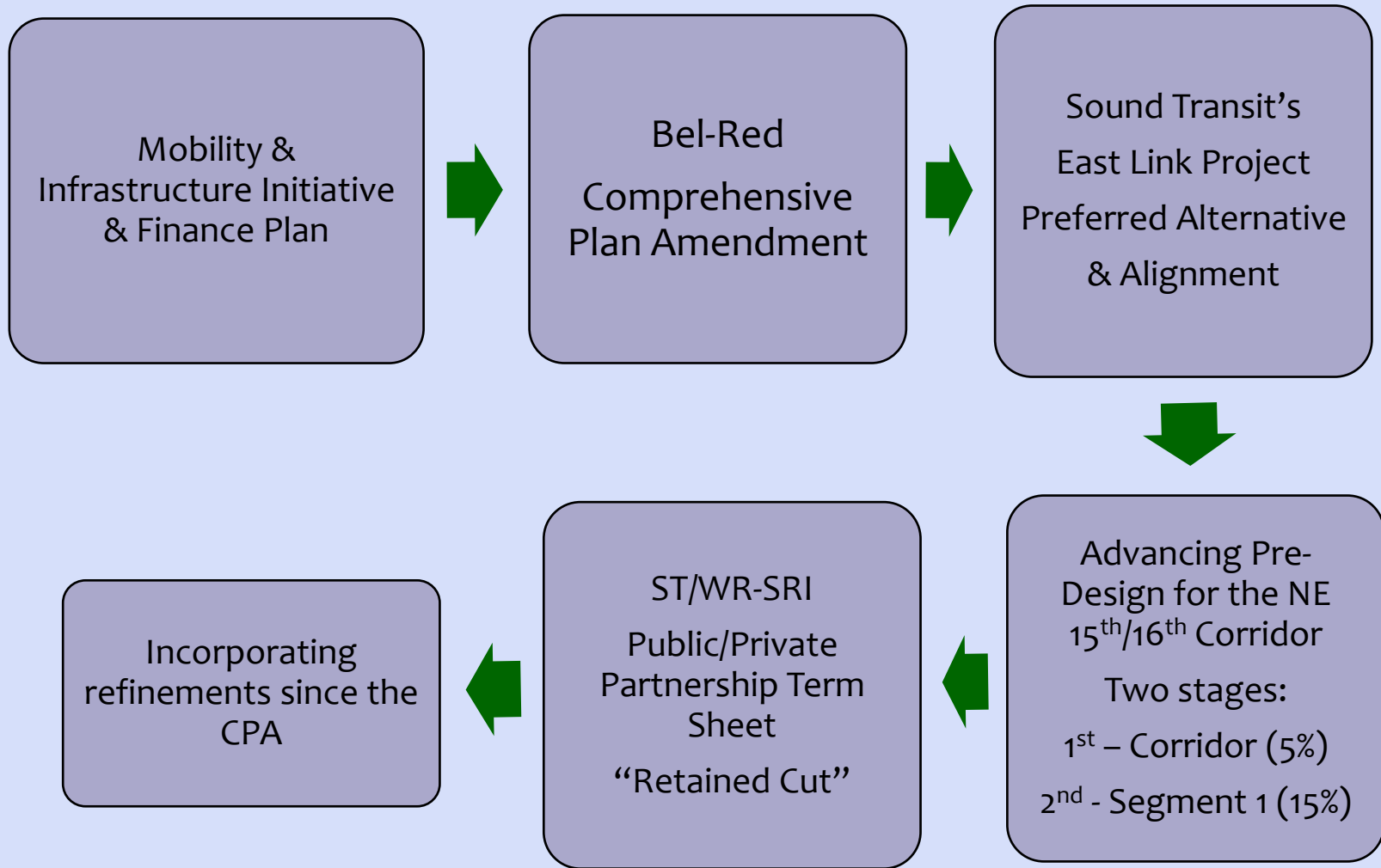
Receive:

- Feedback on options and conclusions
- Direction on next steps

Overview

- Brief Review
 - Policy Direction / Guiding Principles
 - Elements of the NE 15th/16th Multi-Modal Corridor
- Cross-section Variables & Tradeoffs
- Cost Estimates
- Next Steps

Brief Review - Where we started:



Key refinements:

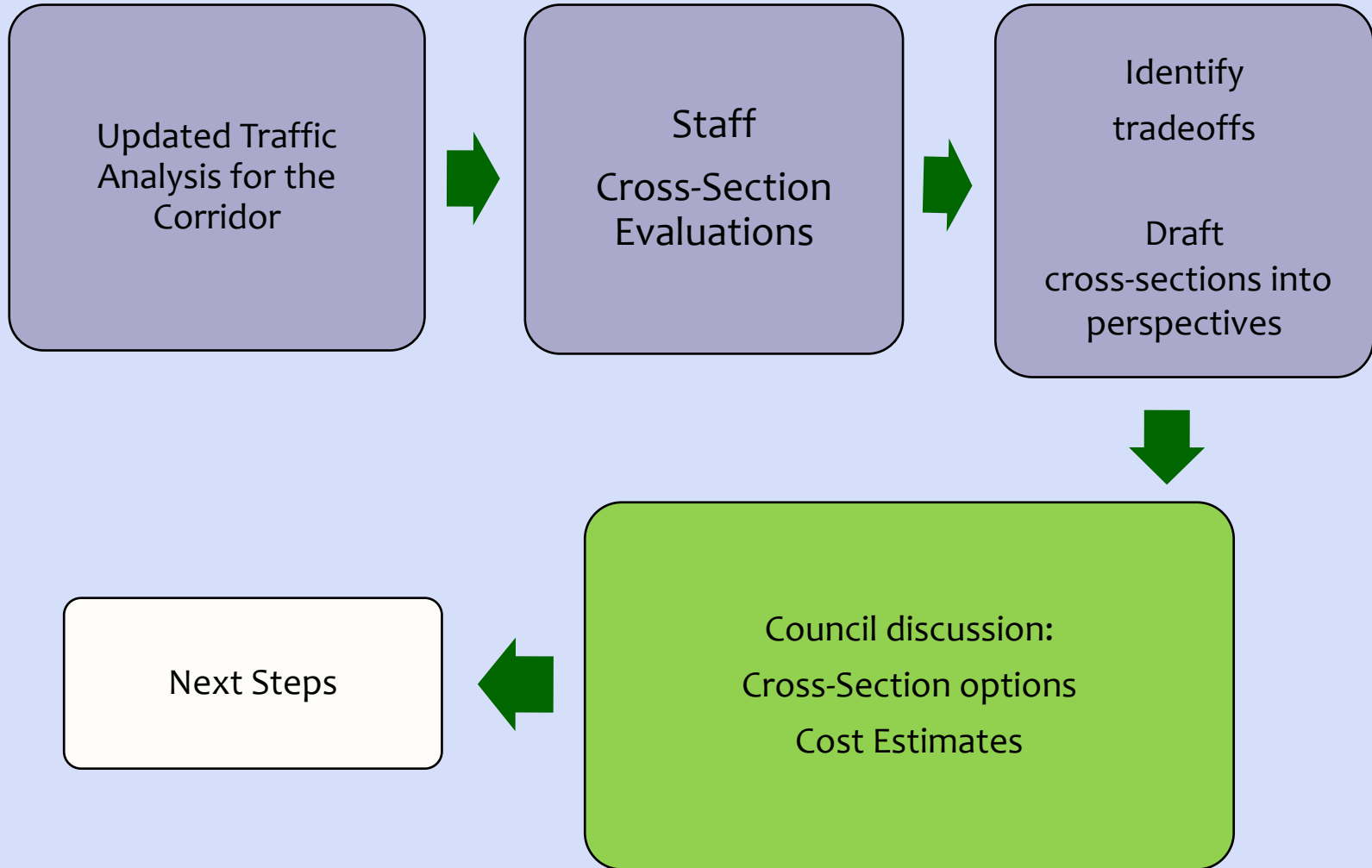
Sound Transit East Link Alignment:

- Preferred alternative alignment – from BNSF
- North Hybrid Alignment (separated from 15th/16th - BNSF to 130th
- Retained cut option versus at-grade option (122nd TOD)
- East of 124th Ave NE returns to center running alignment at-grade

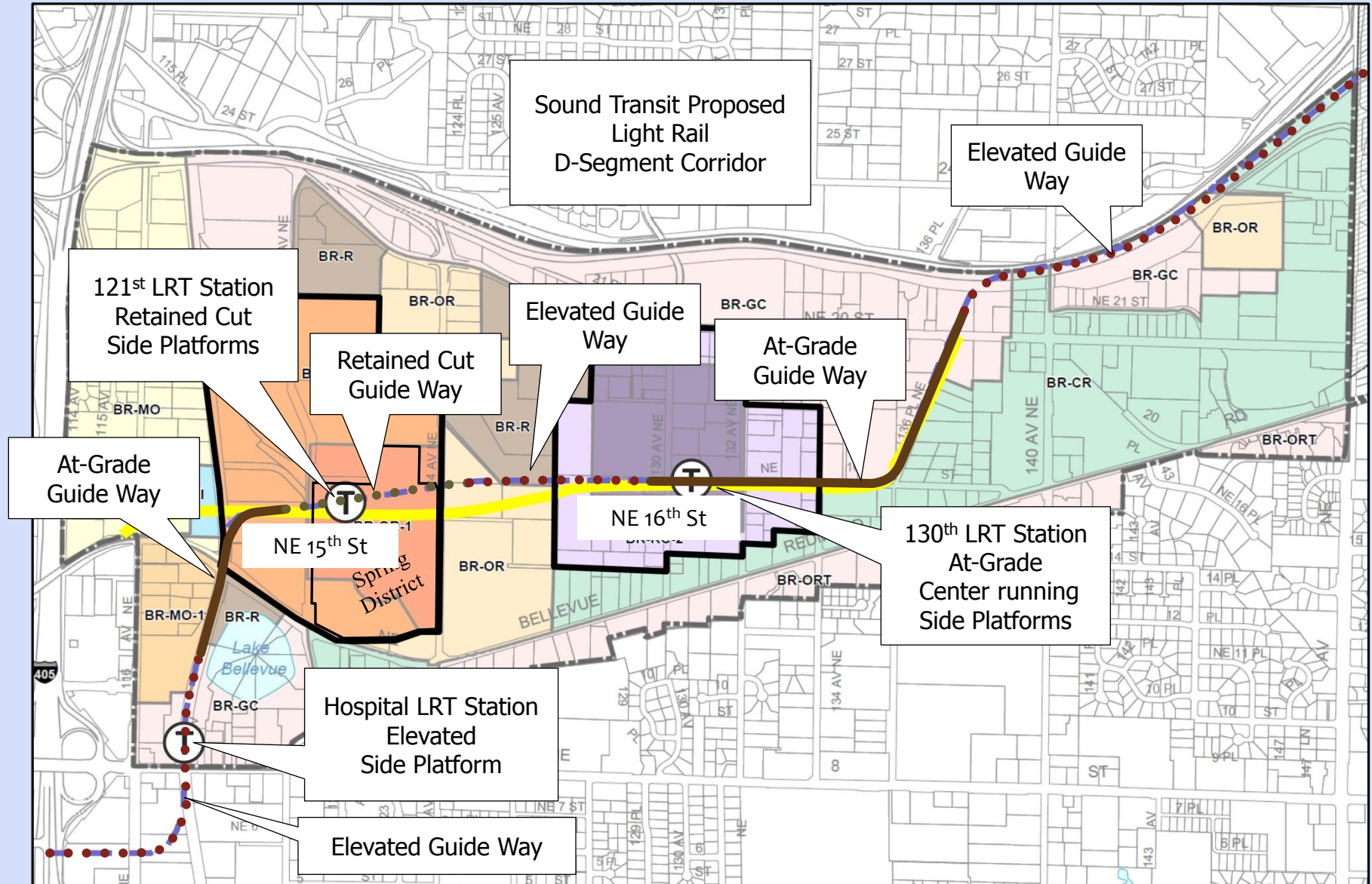
Traffic Data

- Refined network information – Example, NE 6th Street Extension
- Updated trip distribution
- Modeling LRT assumptions and performance

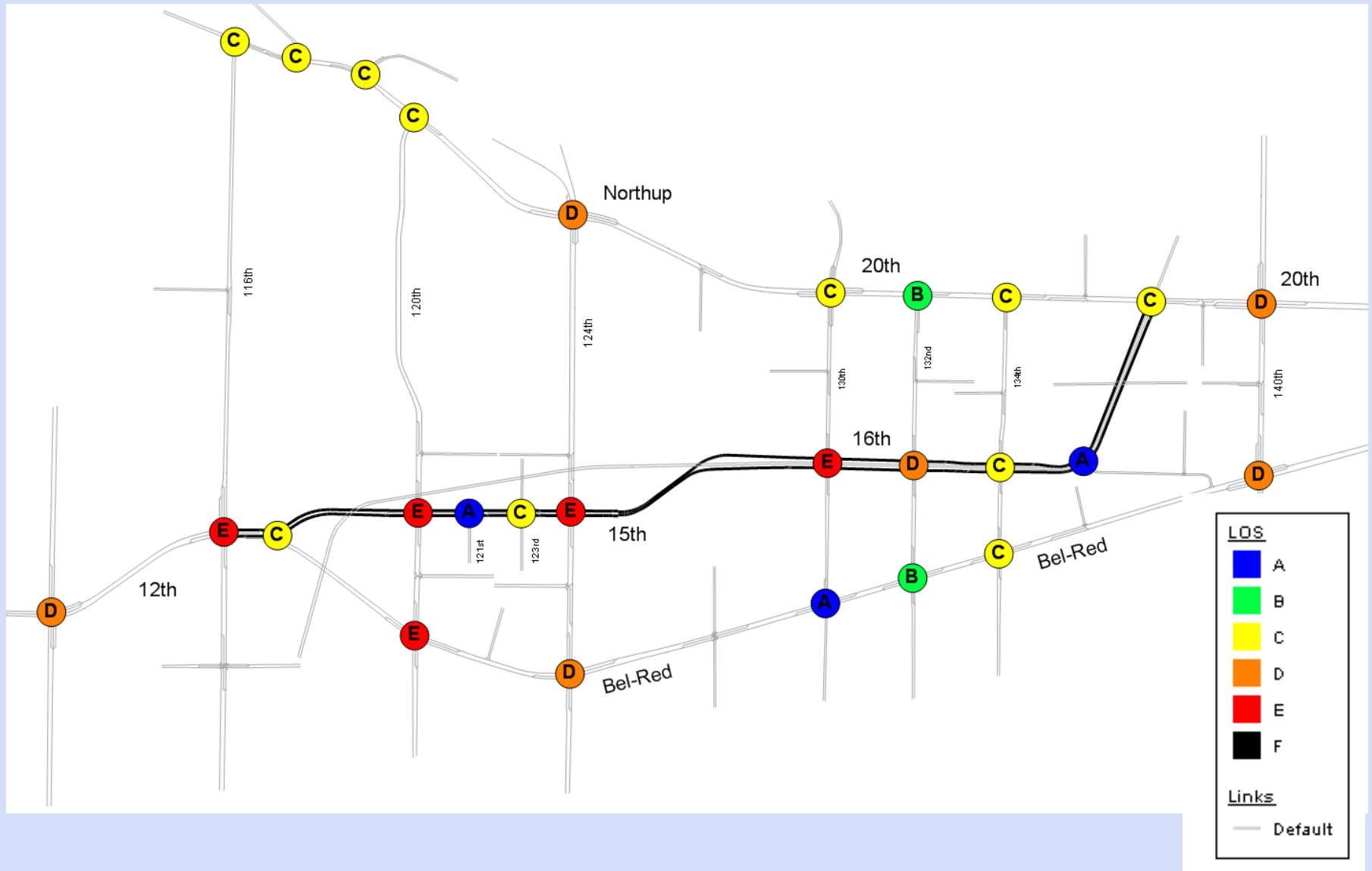
Process incorporating the refinements:



Sound Transit D2 Alignment:



VISSIM Network LOS



Policy Direction & Guiding Principles:

Policies call for:

- A Unique corridor
- A key Placemaking feature
- A Multi-Modal corridor
- A connective green spine linking landscape, open-space, and the corridor
- A High Quality pedestrian and bicycle connection
- LRT and Stations serving TOD's w/ pedestrian orientation supporting ridership

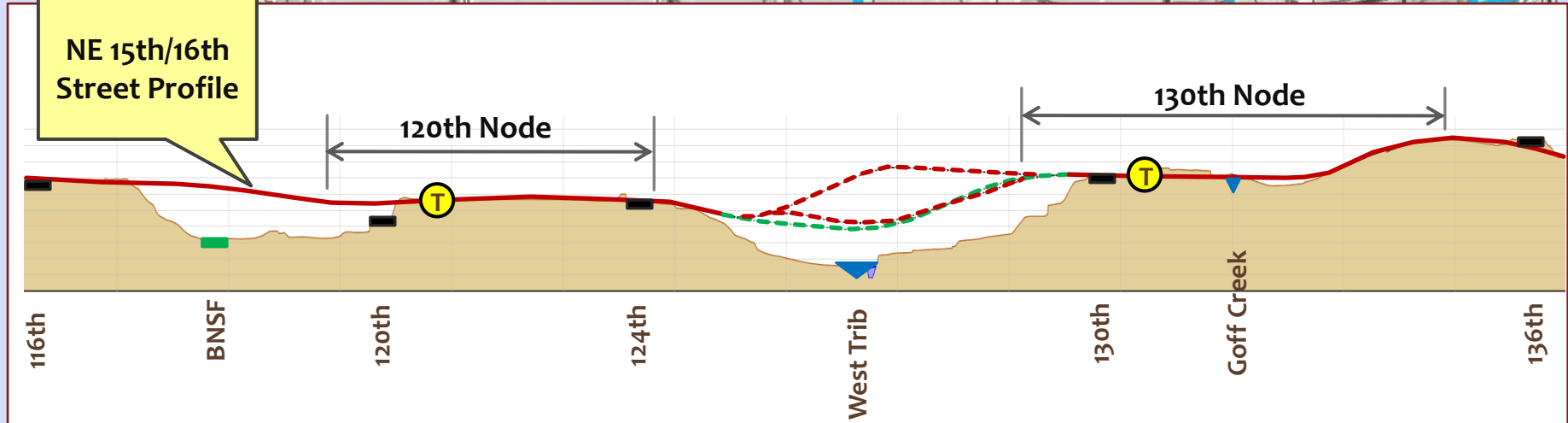
Guiding Principles:

- Meet the policies as outlined in the Subarea Plan
- Create a sense of place
- Strive toward narrowed cross-sections while striking a balance to provide all desirable elements
- Manage and limit impacts, and allow for transitions along the corridor including transition with development and/or phased implementation

Influences: Topography



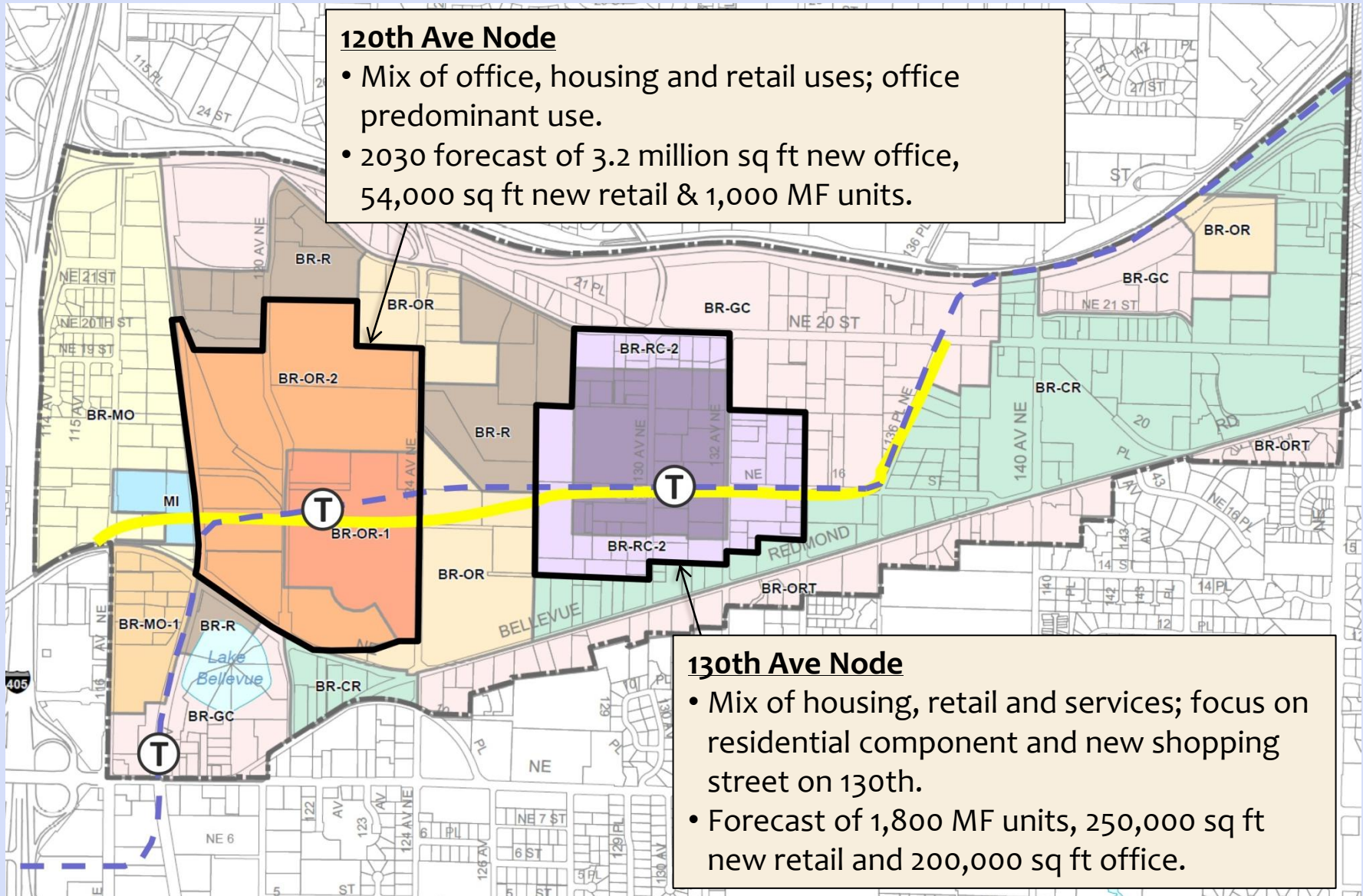
NE 15th/16th
Street Profile



Land Use:

120th Ave Node

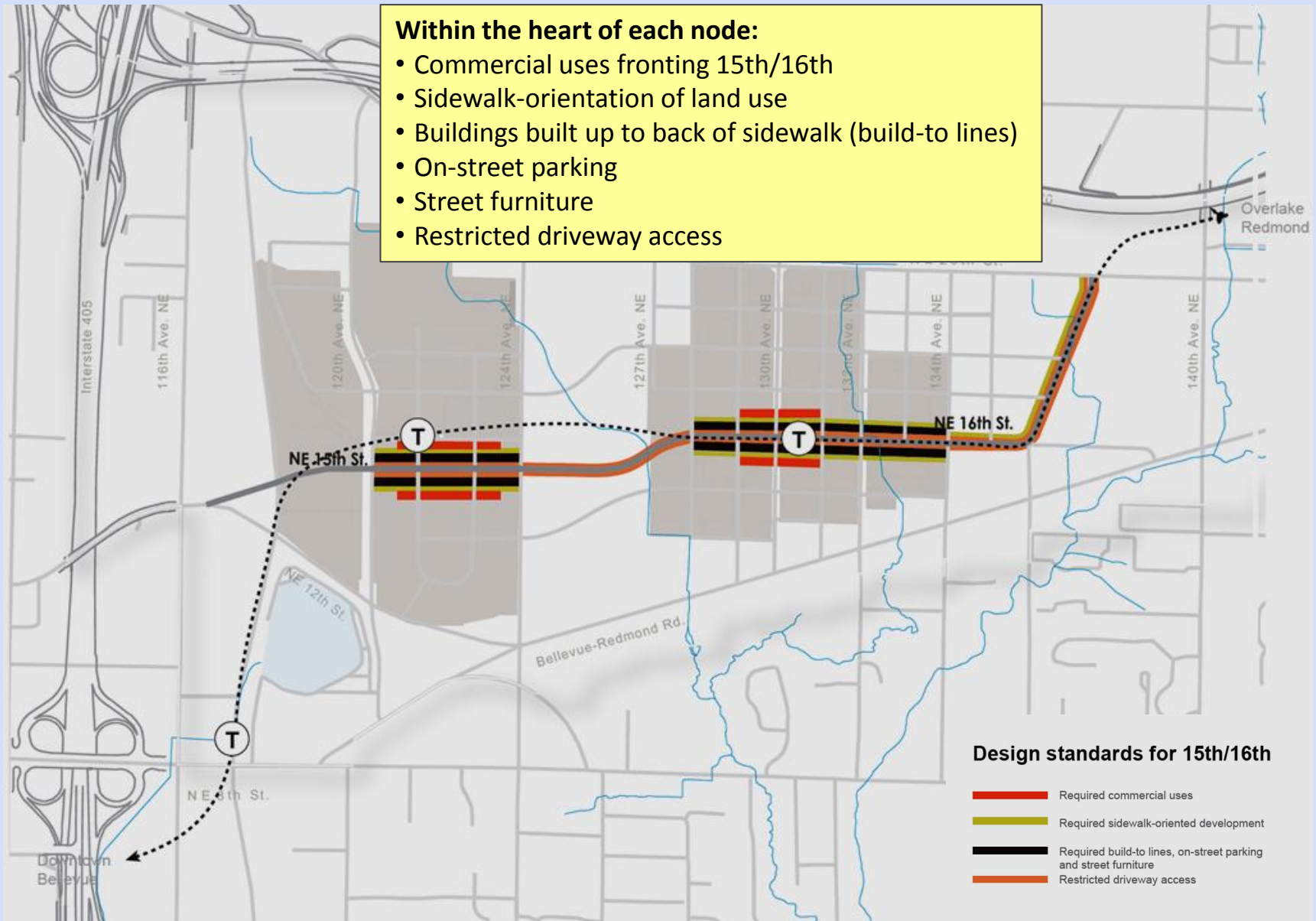
- Mix of office, housing and retail uses; office predominant use.
- 2030 forecast of 3.2 million sq ft new office, 54,000 sq ft new retail & 1,000 MF units.



130th Ave Node

- Mix of housing, retail and services; focus on residential component and new shopping street on 130th.
- Forecast of 1,800 MF units, 250,000 sq ft new retail and 200,000 sq ft office.

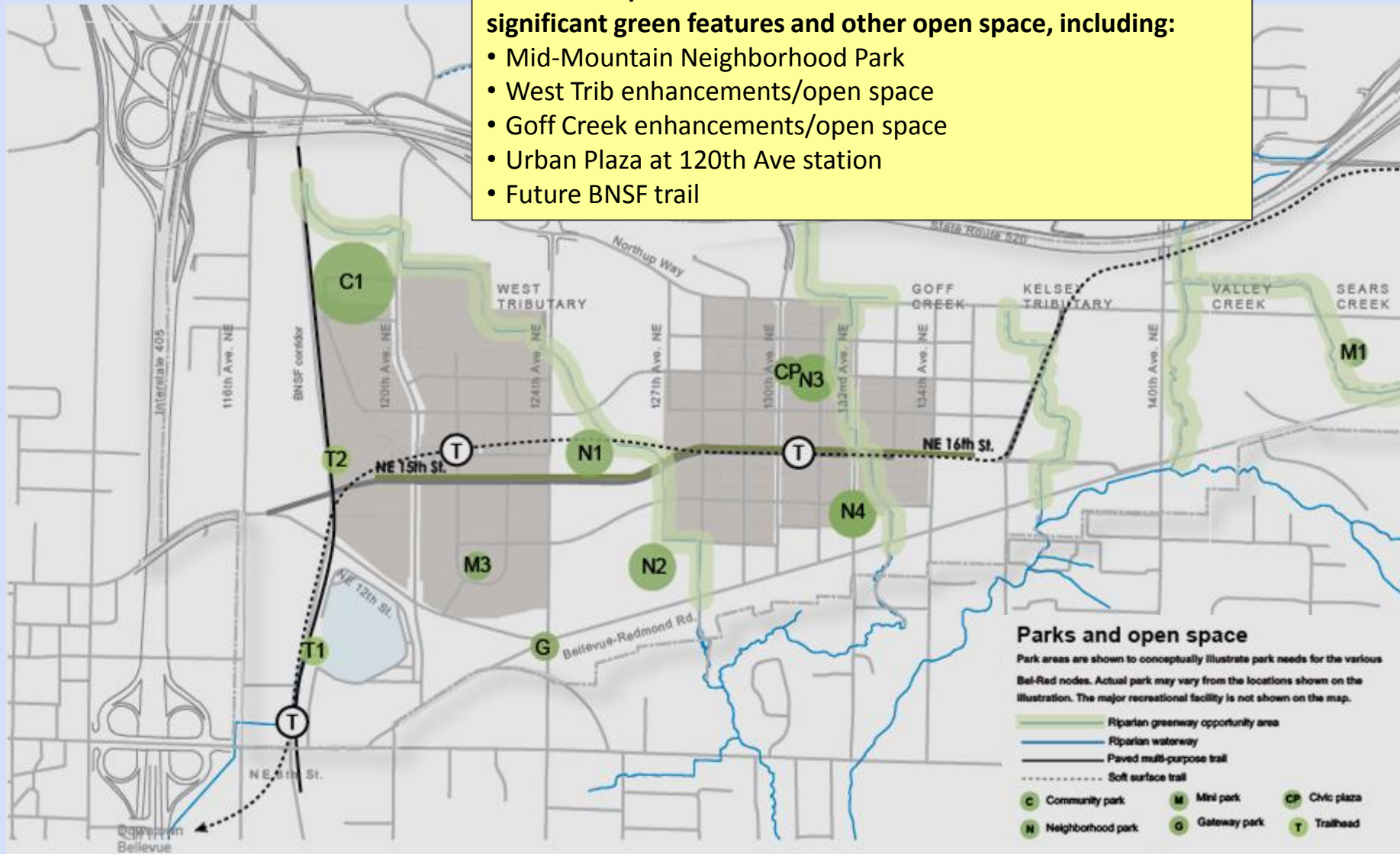
Current Urban Design framework for 15th/16th



Parks & Open Space

The NE 15th/16th corridor will interface with a series of significant green features and other open space, including:

- Mid-Mountain Neighborhood Park
- West Trib enhancements/open space
- Goff Creek enhancements/open space
- Urban Plaza at 120th Ave station
- Future BNSF trail



Elements influencing function and width:

Mandatory Elements:

- Sound Transit's East Link & Station locations
- Roadway Travel & Turn Lanes
- Non-Motorized Facilities
- Safety for all users
- Land Use / Placemaking
- Landscaping / Green-space

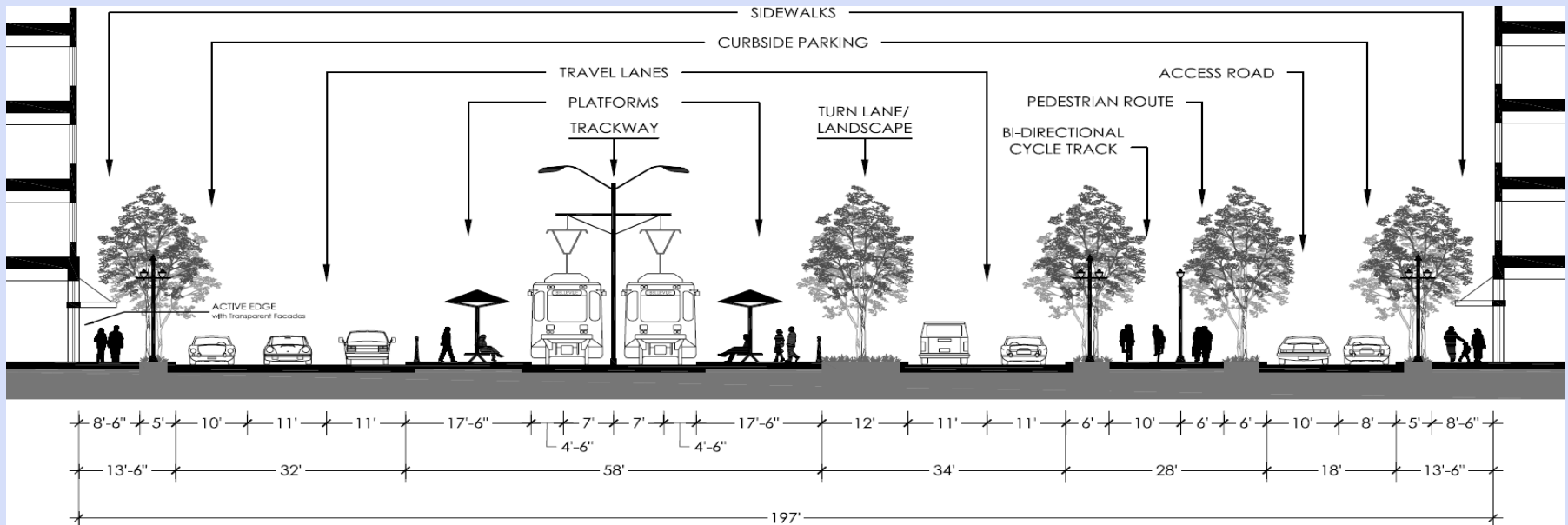
Variables:

- Number of lanes
- On-Street Parking
- Bike Lanes
- Multi-Purpose Pathway
- Protected Bike Zones
- Quality of Median, Buffer, Landscaping
- Physical location or width

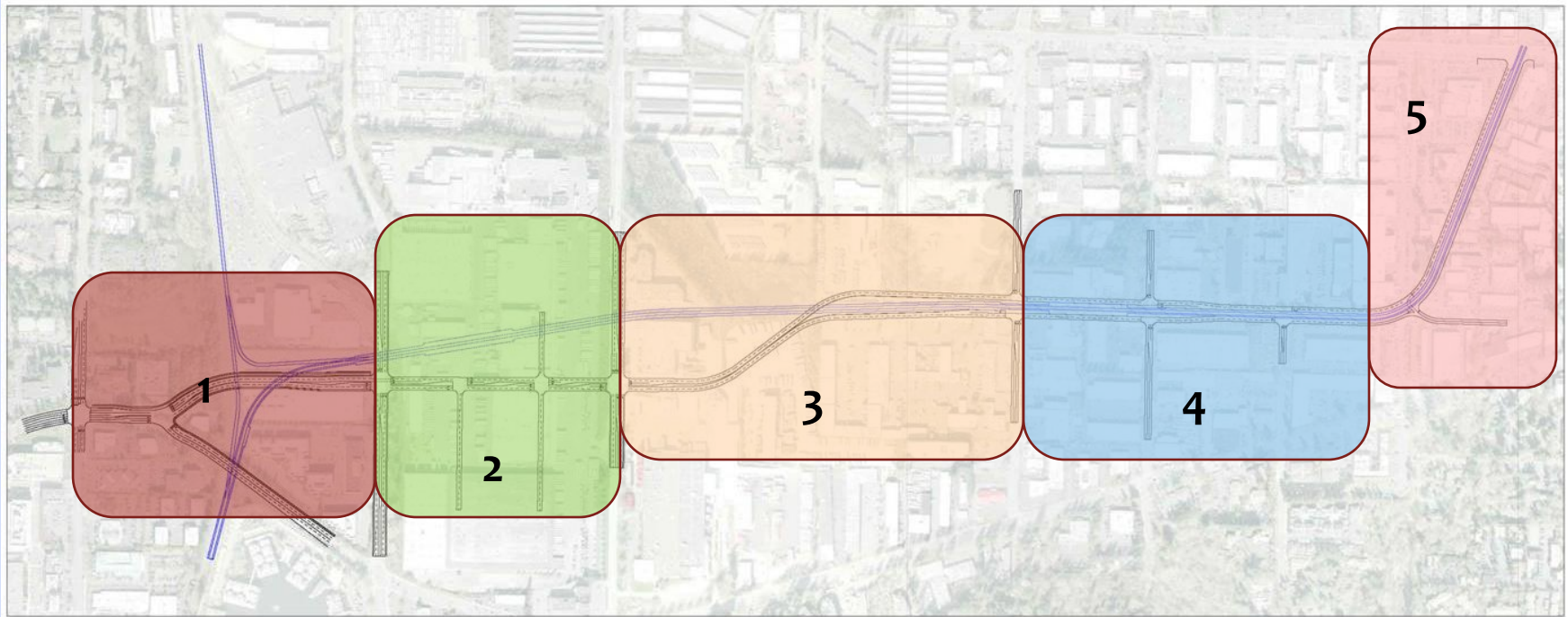
Evolution of the cross-sections


- What we've heard:
 - “Are we attempting to do too much in the corridor?”
 - “197' is too wide, what is an appropriate width?”
 - “The width & design should not be a pedestrian barrier”

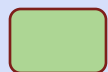
Bel-Red 120th to 124th concept 2008




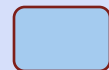
Project Zones




 #1 – 116th to 120th

 #2 – 120th to 124th

 #3 – 124th to 130th

 #4 – 130th to 136th

 #5 – 136th/ 16th
Not part of presentation

Zone 1: 116th to 120th

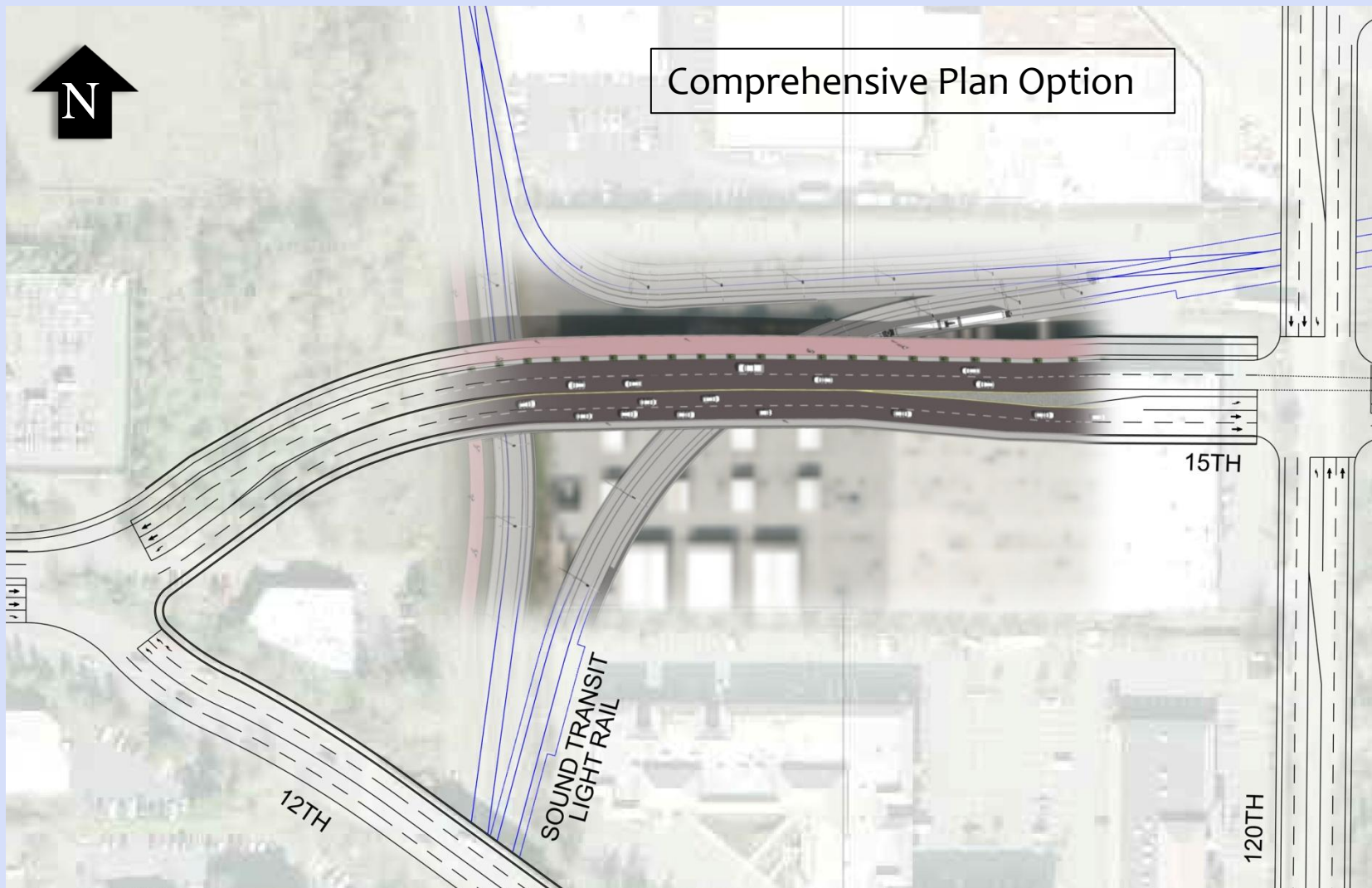
Constraints:

- Topography - Spanning BNSF, LRT alignment, and wetlands
- Retain connection to NE 12th St & 116th Ave NE
- PSE Sub-station, site impacts, economic remnants
- 30 MPH posted speed – limited access

Variables:

- Number of travel lanes
- Bike Lanes
- Multi-Purpose Pathway
- Landscaping

Zone 1 – aerial view



Zone 1: Looking toward 120th

Perspective Looking East



Multi-Purpose Path (Comprehensive Plan Option)

82' Cross Section

11' Outside Lanes
 13' Inside Lanes
 1' Median Barrier
 16' Multi-Purpose Path
 8' Sidewalk

1' Pedestrian Barriers
 1' Curb and Gutter
 2' Shy Distance from Planters
 4' Planter Boxes

Zone 1 – Summary:

Four travel lanes

- Addresses capacity, access, and circulation

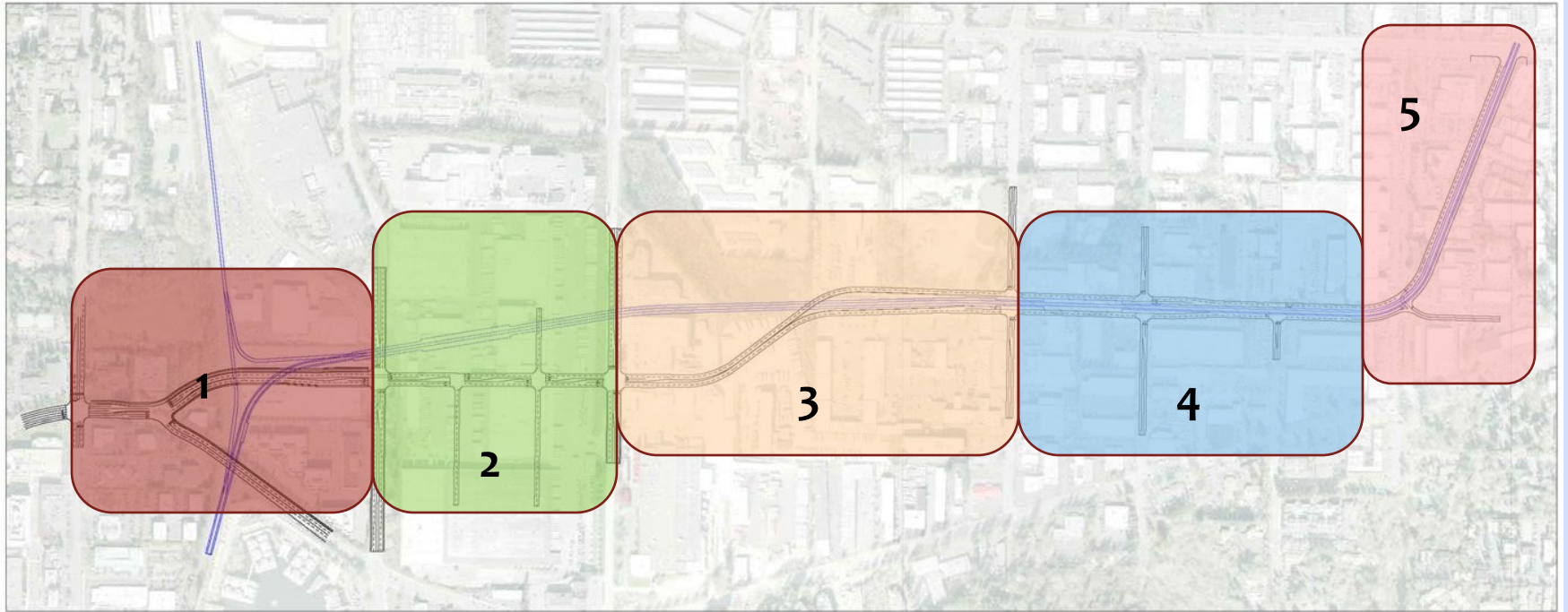
Multi-Purpose Path (MPP)

- Reduces vehicular conflict
- Reduces delay at NE 12th signal
- Continuity with NE 12th Street bridge MPP to west
- Serves Medical District connection to LRT station
- Narrowed width

Landscape Strip & Planter Boxes

- Provides green-space and separation from travel lanes
- Planter Boxes on Structure only – Landscape strip elsewhere

Zone 2:



#1 – 116th to 120th

#2 – 120th to 124th

#3 – 124th to 130th

#4 – 130th to 136th

#5 – 136th / 16th

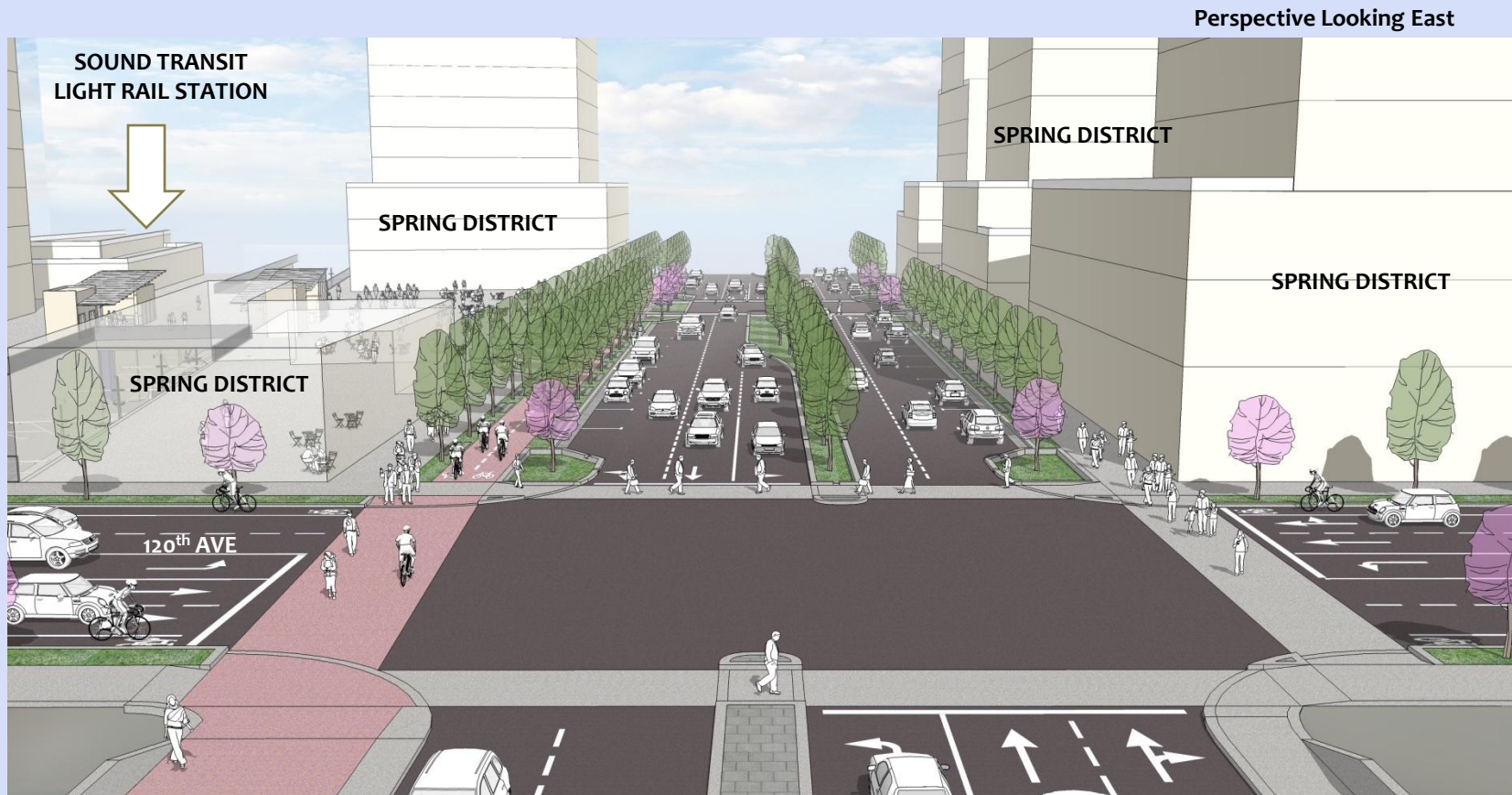
Constraints:

- Plaza and connection with retained cut LRT station on north side
- Internal street connections
- TOD Catalyst Development Proposal, site development/orientation
- 25 MPH posted speed

Variables:

- Number of travel lanes
- On-Street Parking
- Median
- Multi-Purpose Path
- Protected Bike Lanes with or without buffer
- Bike Lanes on-street

Zone 2 – 120th Ave NE looking east along 15th



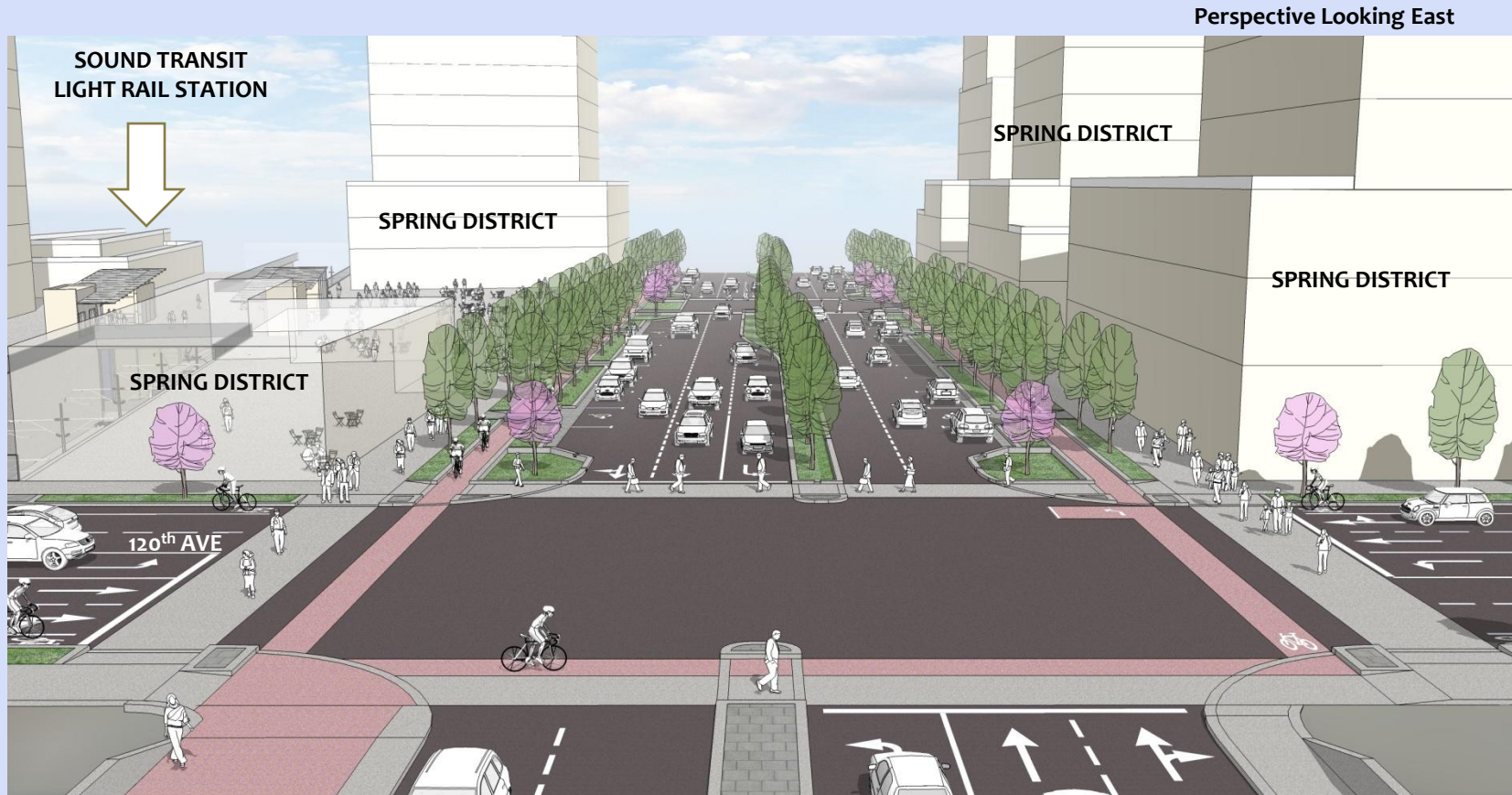
Bi-Directional Bike Path, Parking (Comprehensive Plan Option)

135' Cross Section

11' Lanes
12' Turn Lane
8' Median Planter
10' Bi-Directional Bike Path

12' Sidewalks
10' Parking
1' Curb & Gutter
5' Planter Buffers

Zone 2 – 120th Ave NE looking east along 15th

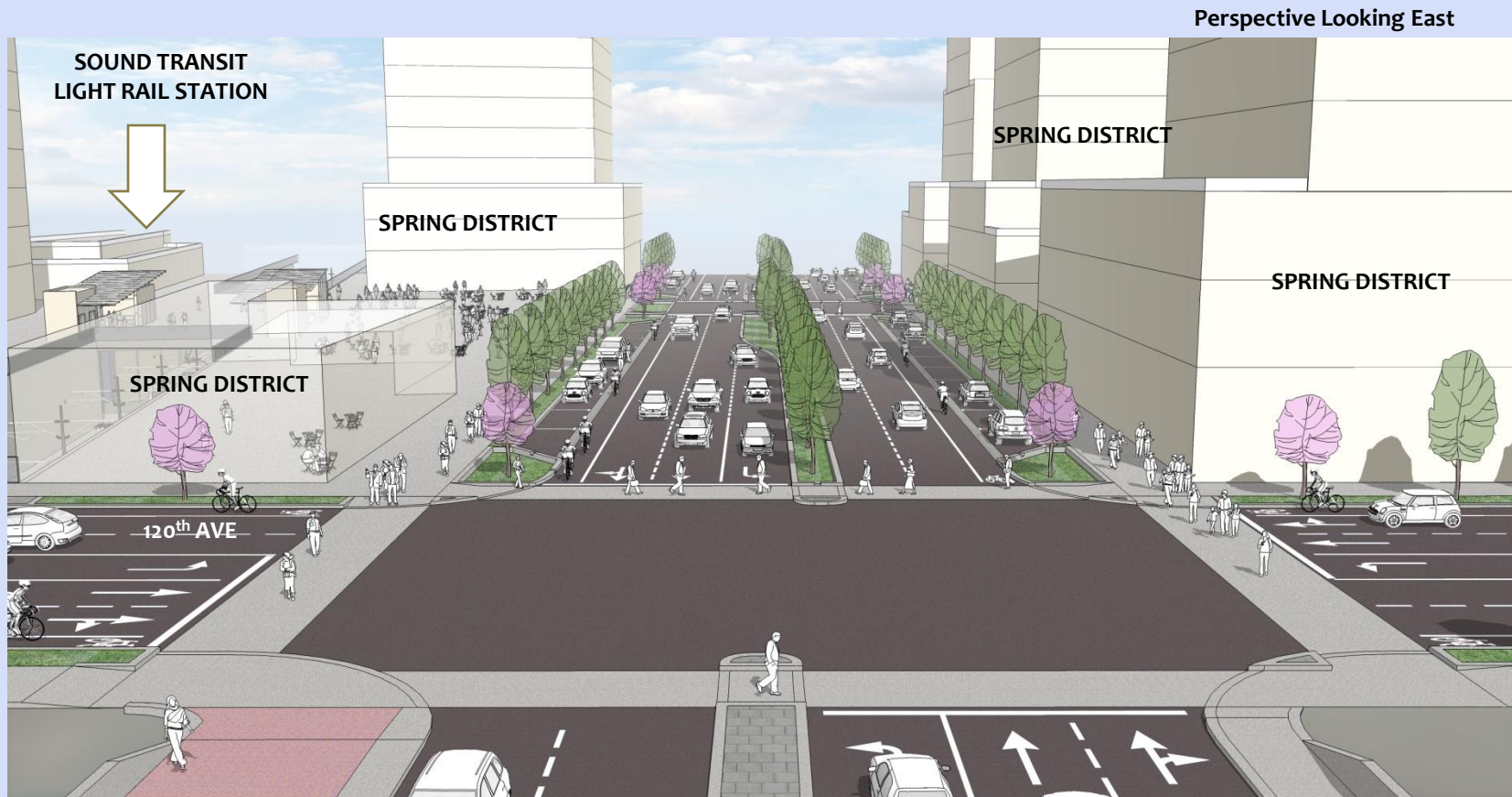


Buffered Protected Bike Lane, Parking 145' Cross Section

11' Lanes
12' Turn Lane
8' Median Planter
7.5' Protected Bike Lane

12' Sidewalks
11' Parking/Lane
1' Curb & Gutter
5' Planter Buffers

Zone 2 – 120th Ave NE looking east along 15th

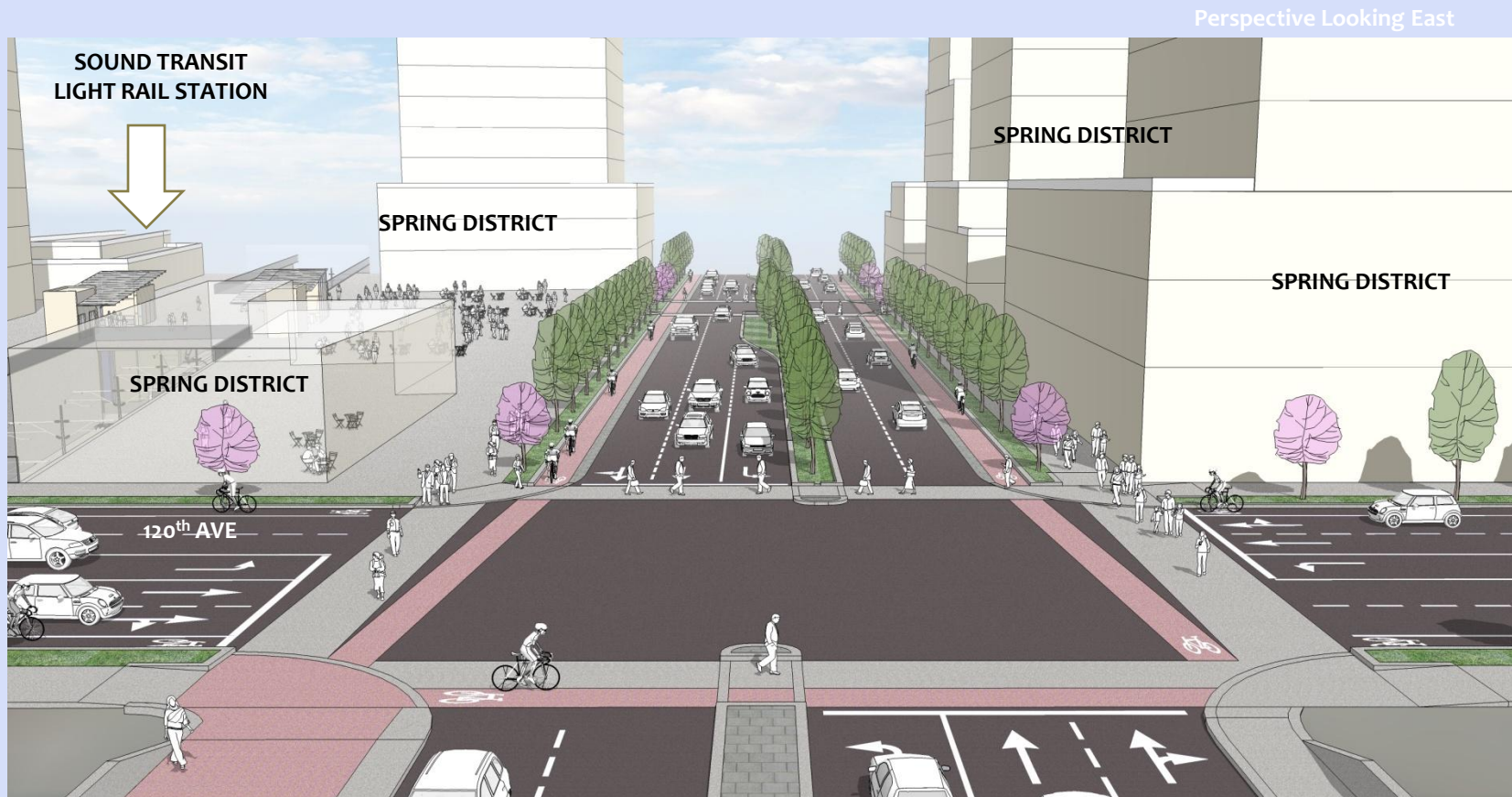


Bike Lane, Parking 130' Cross Section

11' Lanes
12' Turn Lane
8' Median Planter
5' Bike Lane

12' Sidewalks
10' Parking
1' Curb & Gutter
5' Planter Buffer

Zone 2 – 120th Ave NE looking east along 15th



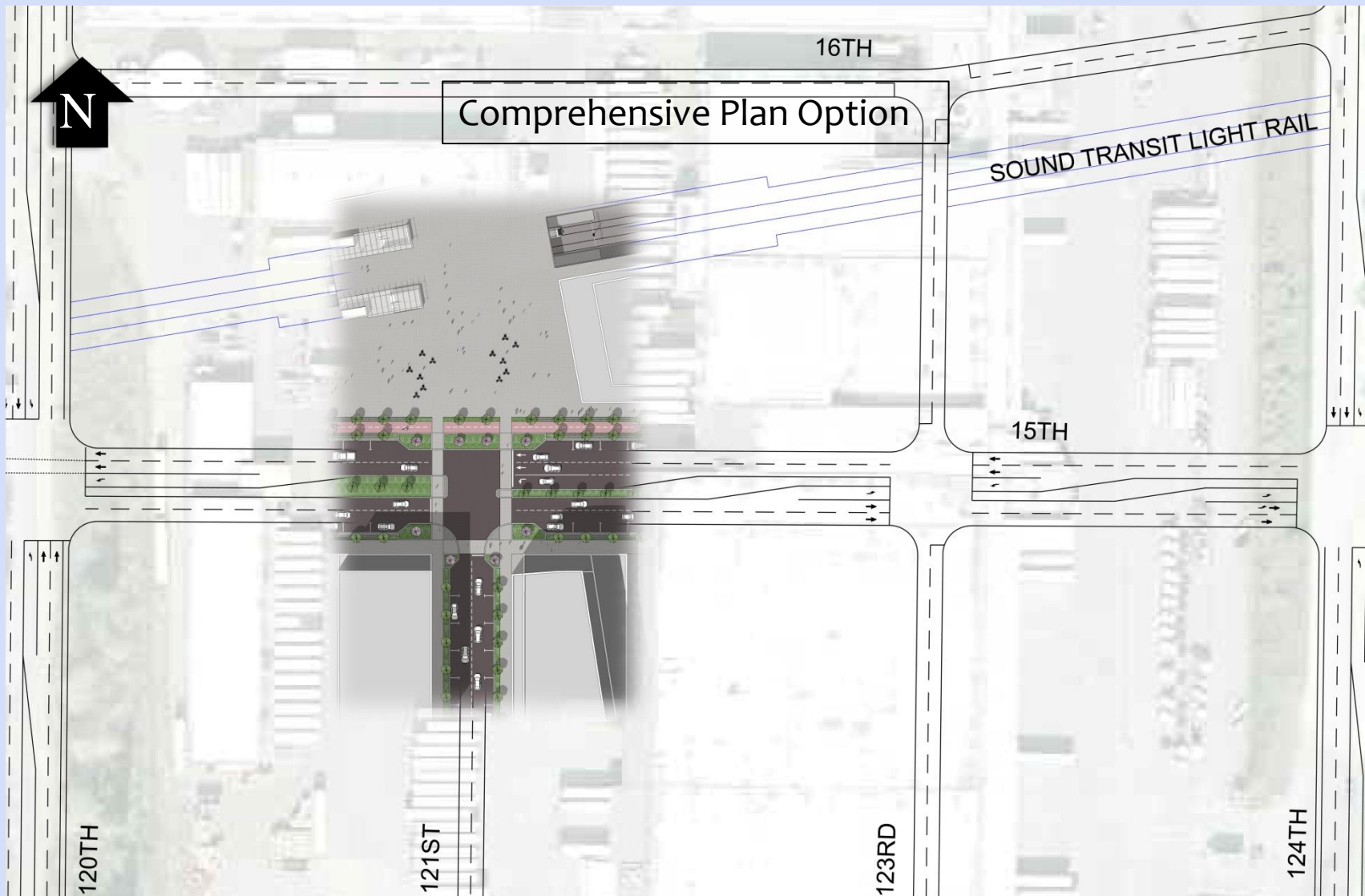
Protected Bike Lane, Interim Parking

119' Cross Section

11' Lanes
12' Turn Lane
8' Median Planter
7.5' Protected Bike Lane

12' Sidewalks
11' Parking
1' Curb & Gutter
5' Planter Buffer

Zone 2 – 15th @ 121st



Zone 2 – NE 15th proximity to Plaza/LRT Station

Perspective Looking East



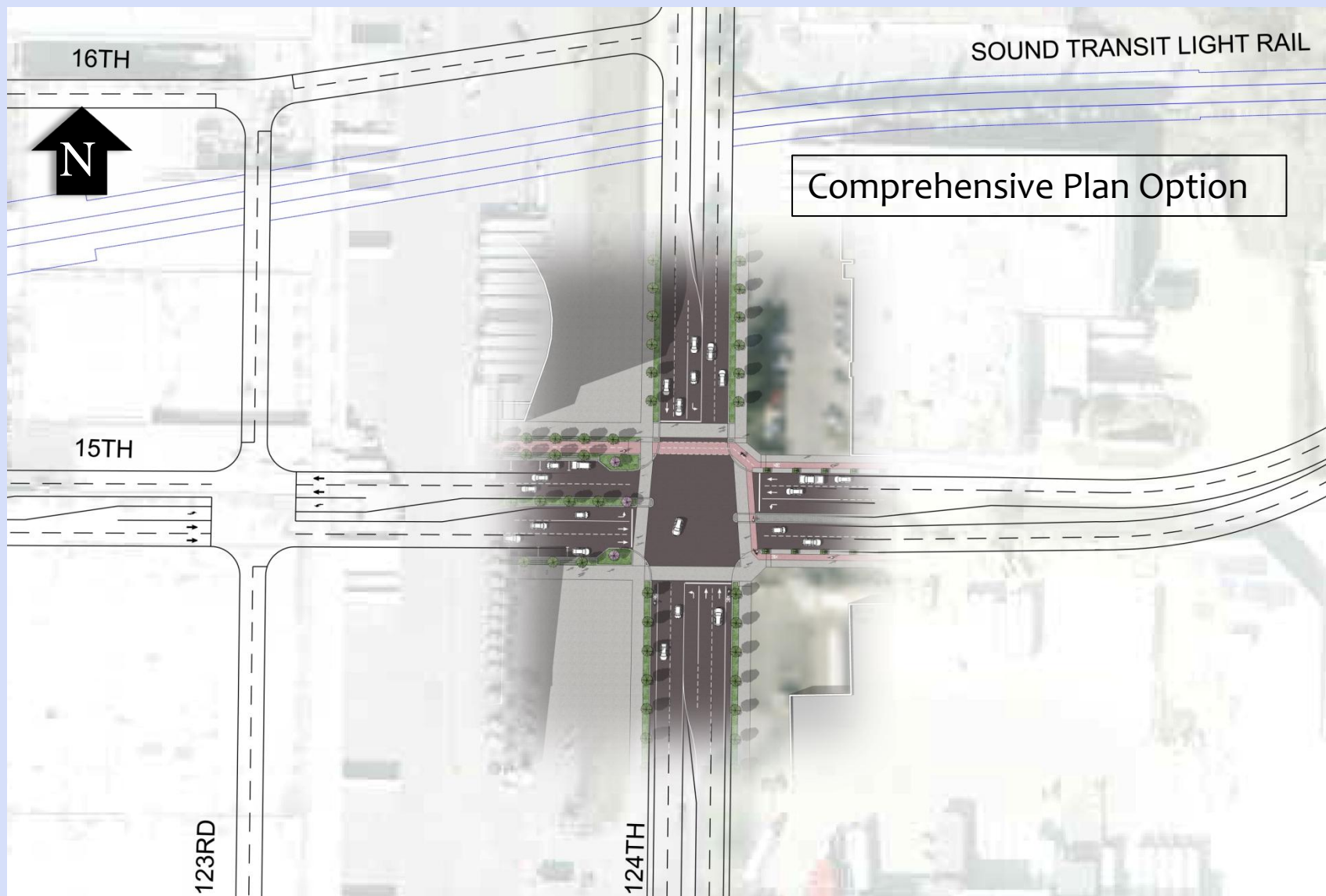
Bi-Directional Bike Path, Parking (Comprehensive Plan Option)

135' Cross Section

11' Lanes
12' Turn Lane
8' Median Planter
10' Bi-Directional Bike Path

12' Sidewalks
10' Parking
1' Curb & Gutter
5' Planter Buffer

Zone 2 transition to Zone 3 – at 124th



Zone 2 to Zone 3 – transition to 2 lanes along 15th

Perspective Looking East



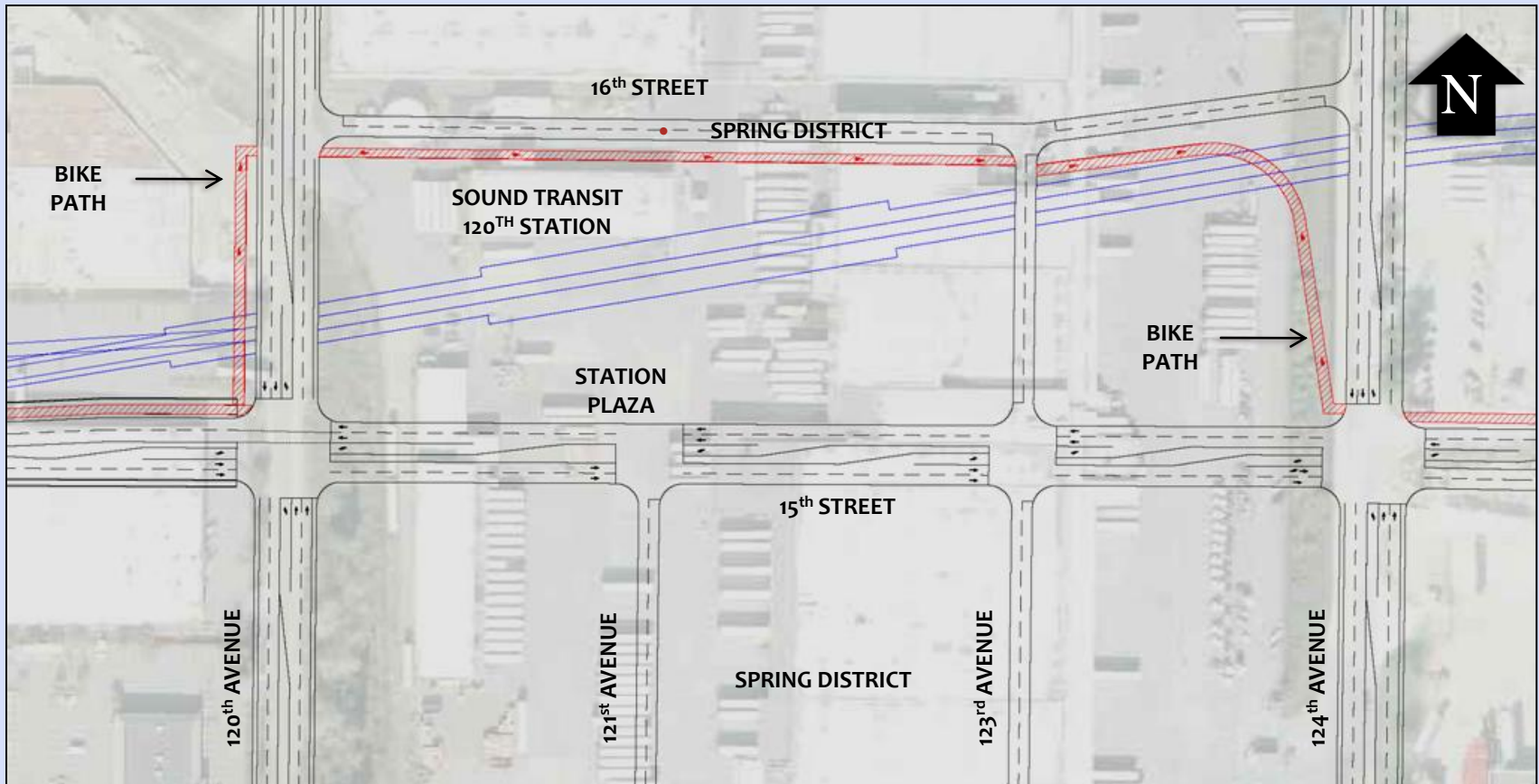
Bi-Directional Bike Path, Parking (Comprehensive Plan Option)

135' Cross Section

11' Lanes
12' Turn Lane
8' Median Planter
10' Bi-Directional Bike Path

12' Sidewalks
10' Parking
1' Curb & Gutter
5' Planter Buffer

Zone 2 – Optional Alignment Multi-Purpose Path



Does not show how bikes are accommodated on NE 15th.

Zone 2 – Summary:

Four travel lanes

- Addresses capacity, access, and circulation

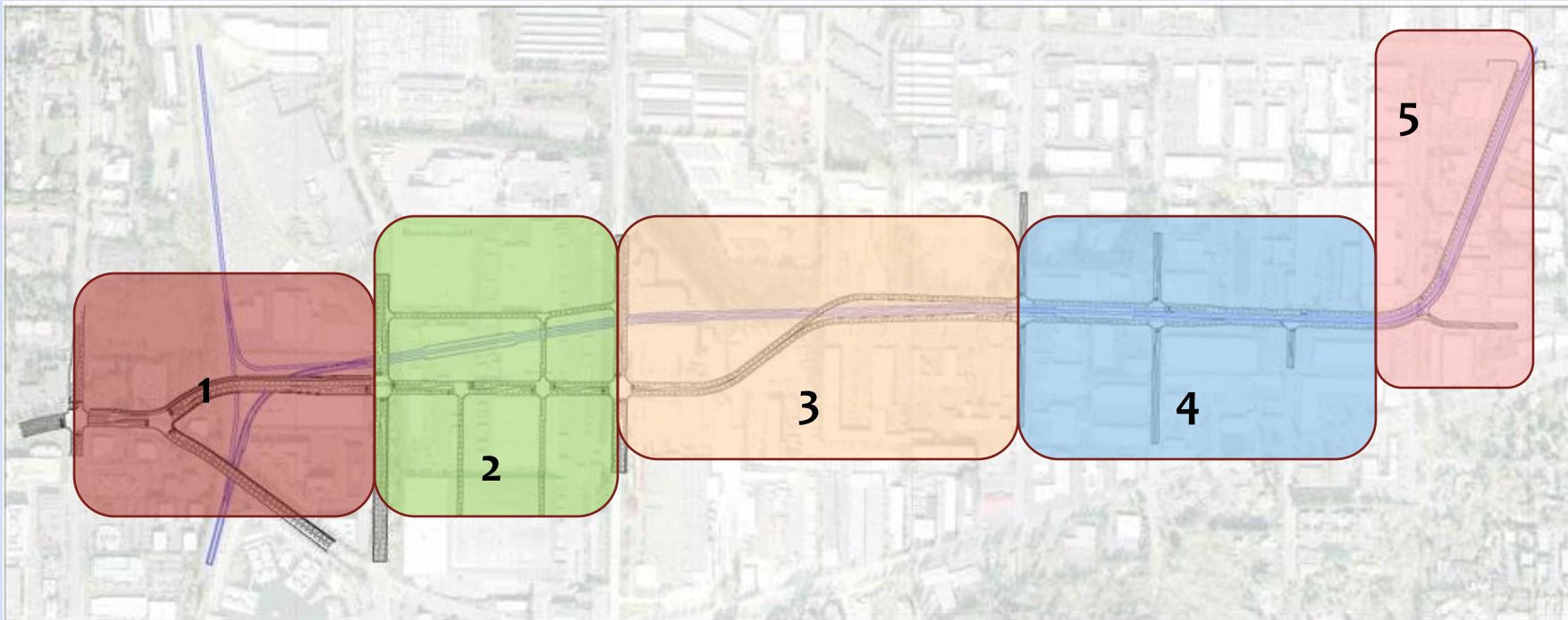
Variables:

	Full <u>Section</u>	Delete + <u>Parking</u>	Delete <u>Median</u>
Multi-Purpose Path	135'	115'	107'
Bike Lanes on-street	130'	110'	102'
Protected Bike lane with landscape buffering	145'	125'	117'

Tradeoffs:

- On-Street Parking – off-peak, permanent, limit location or delete
- Bike facility –access along corridor, to/from development and LRT station, and other streets or open-space
- Place making - opportunities and integration with Plaza design
- Quality of Landscape/Green-space – including Natural Drainage Practices
- Cost of improvement

Zone 3:



#1 – 116th to 120th

#2 – 120th to 124th

#3 – 124th to 130th

#4 – 130th to 136th

#5 – 136th/ 16th

Zone 3: 124th to 130th

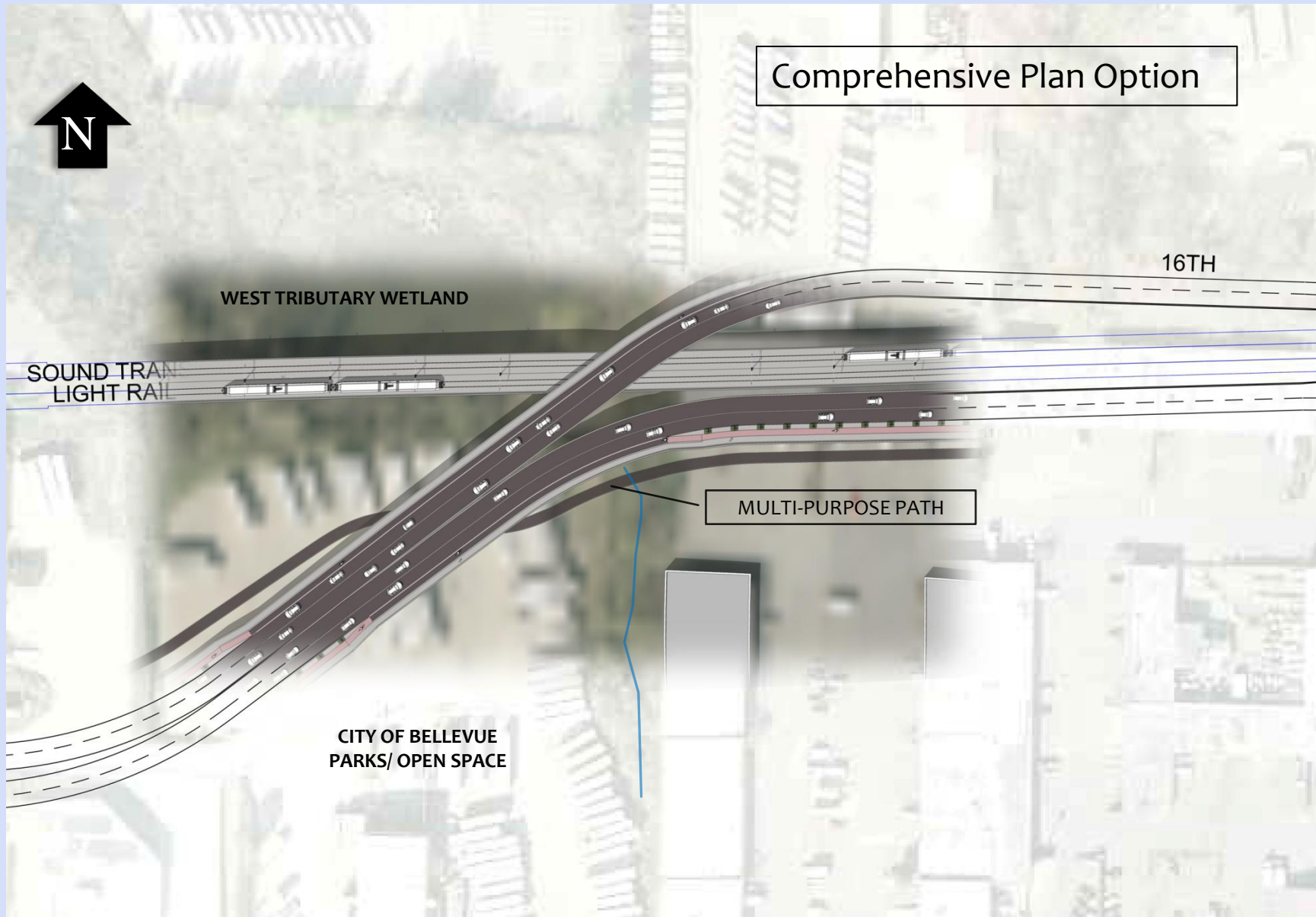
Constraints:

- Topography - Span West Tributary/Open-Space, LRT alignment
- Possible split grade for roadway – westbound lanes over/under/through LRT alignment
- Site impacts, environmental & aquatic habitat, and access
- 30 MPH posted speed – limited access

Variables:

- Number of lanes
- Bike Lanes
- Multi-Purpose Path
- Landscaping

Zone 3 – 15th/16th from 124th to 130th



Zone 3 – 15th/16th looking NE over West Trib

Perspective Looking Northeast



89' Cross Section (Comprehensive Plan Option)

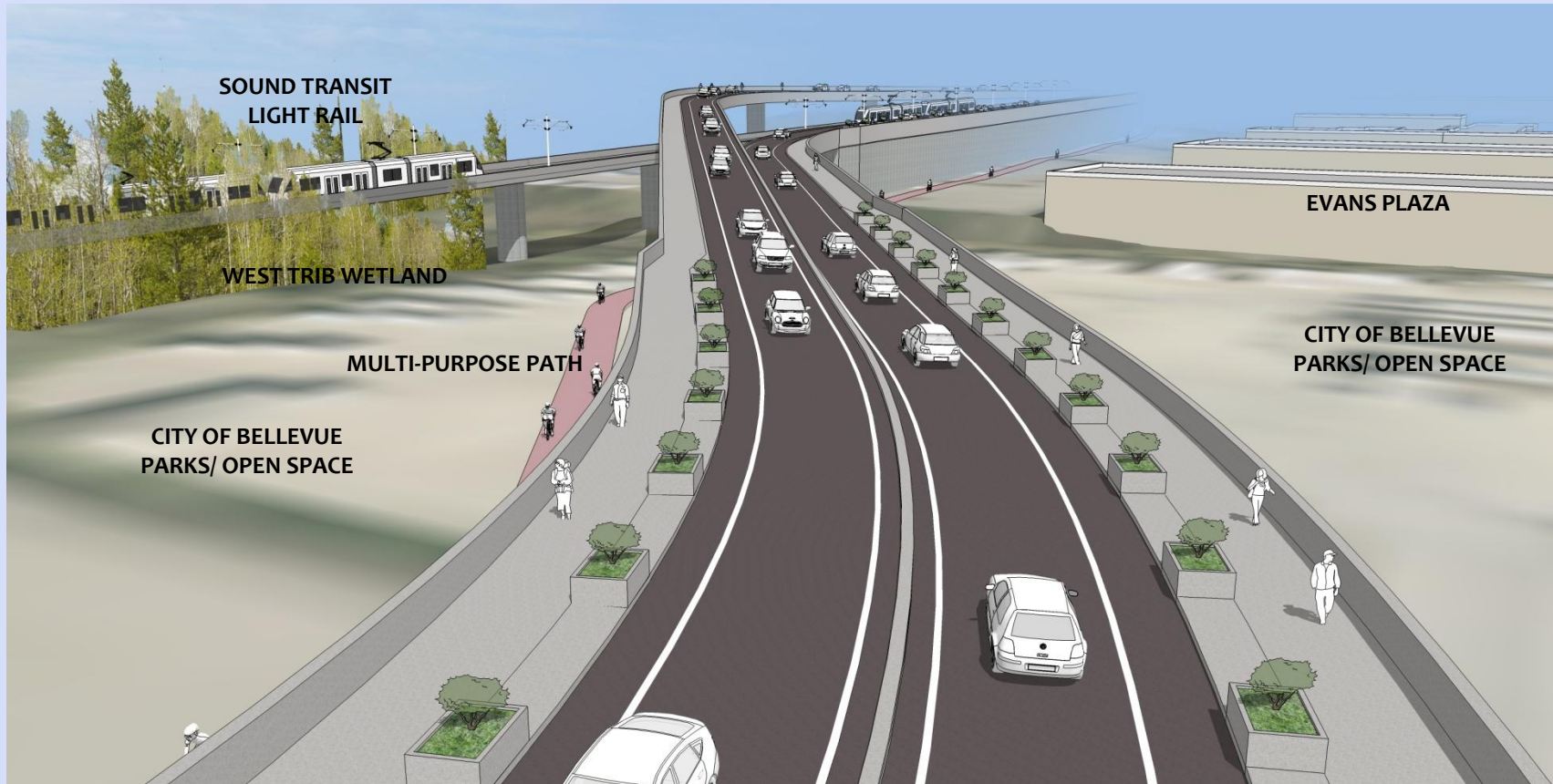
11' Outside Lanes
13' Inside Lanes
1' Median Barrier
5' Bike Lane
6' Sidewalks

1' Pedestrian Barriers
2' Shy Distance from Planters
4' Planter Boxes

Zone 3 – 15th/16th looking NE over West Trib

37

Perspective Looking East



56' Cross Section (On Bridge)

12' Inside Lanes
1' Median Barrier
4' Outside Shoulder
8' Sidewalks

1' Pedestrian Barriers
2' Shy Distance from Median
4' Planter Boxes

64' Cross Section (On Fill)

Zone 3 – Summary:

Two travel lanes

- Addresses capacity, access, and circulation
- Reduces total section and impacts

Multi-Purpose Path (MPP)

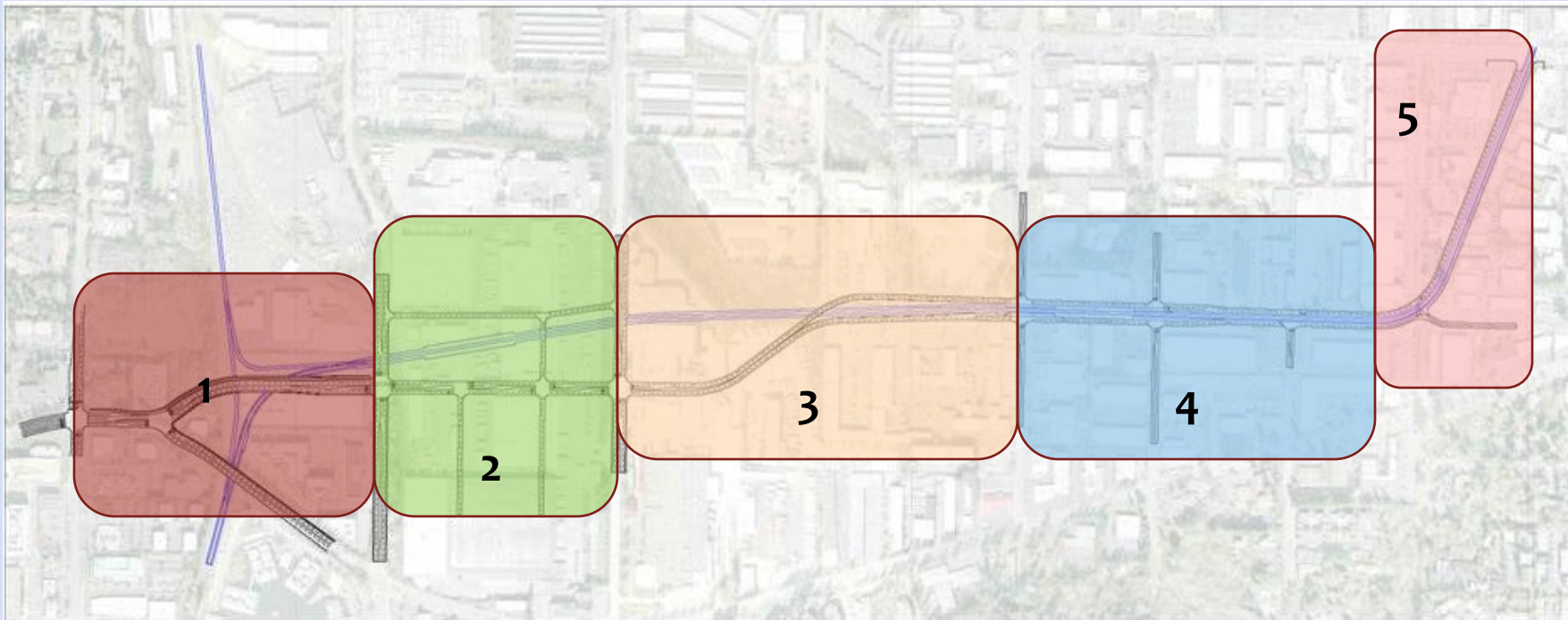
- Separate off-street path eliminates vehicular conflict
- Allows for early implementation
- Connects at-grade with open-space and Park elements

Landscape Strip & Planter Boxes

- Provides green-space and separation from travel lanes
- Planter Boxes on Structure only – Landscape strip elsewhere

Zone 4:

39



#1 – 116th to 120th

#2 – 120th to 124th

#3 – 124th to 130th

#4 – 130th to 136th

#5 – 136th/ 16th

Zone 4: 130th to 136th Pl

Constraints:

- TOD w/ active retail emphasis at street
- LRT & Station center running & at-grade
- Internal street connections
- Interim Park & Ride north side
- 25 MPH posted speed

Variables:

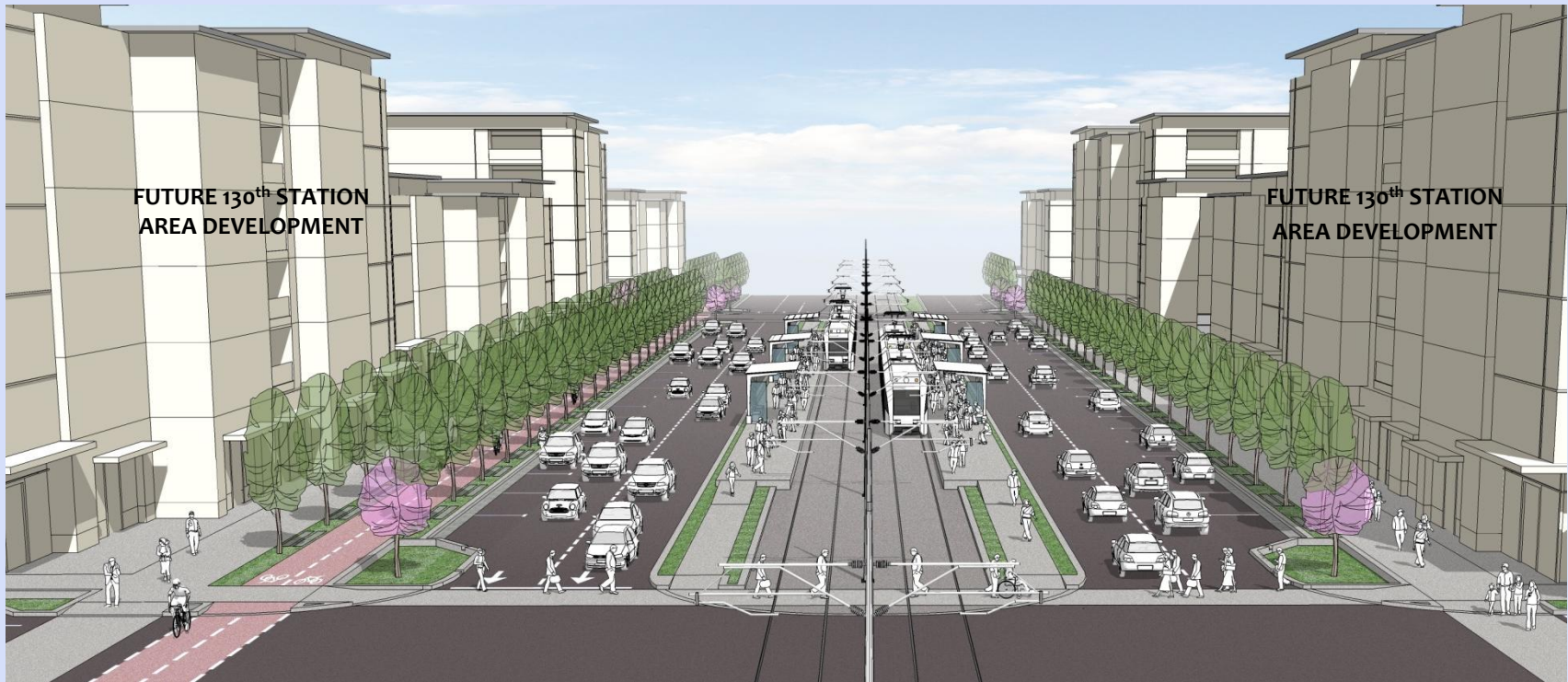
- Number of travel lanes
- On-Street Parking
- Multi-Purpose Path
- Protected Bike Lanes with or without buffer
- Bike Lanes on-street

Zone 4 – NE 16th @ 130th Station Area



Zone – 130th Ave NE looking east along 16th

Perspective Looking East



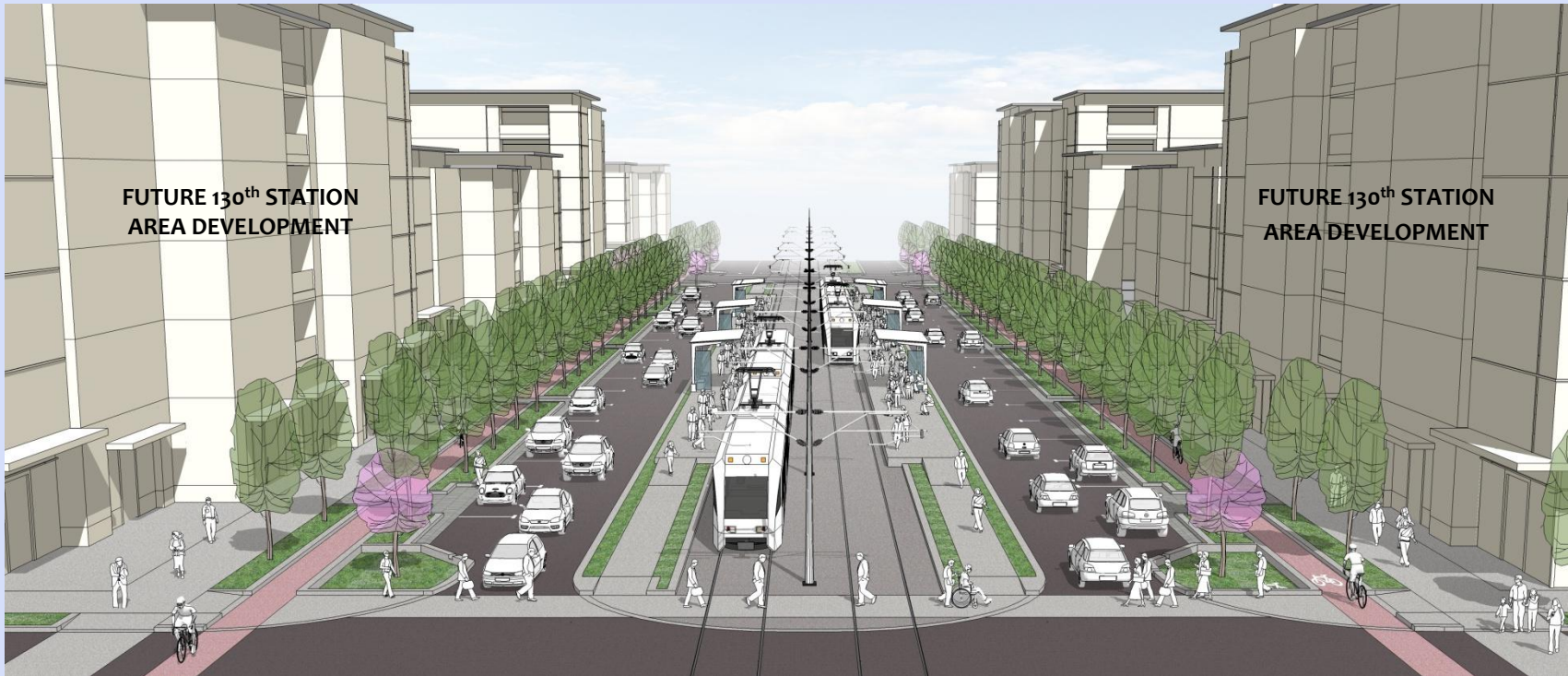
4-Lane, Bi-Directional Bike Path, Including Parking (Comprehensive Plan Option) 177' Cross Section

53' LRT Station Platform and Track
 11' Outside Lanes
 13' Inside Lanes
 12' Turn Lane
 2' Median Planter/Curb
 10' Bi-Directional Bike Path

12' Sidewalks
 10' Parking
 1' Curb & Gutter
 5' Planter Buffer

Zone 4 – 130th Ave NE looking east along 16th

Perspective Looking East



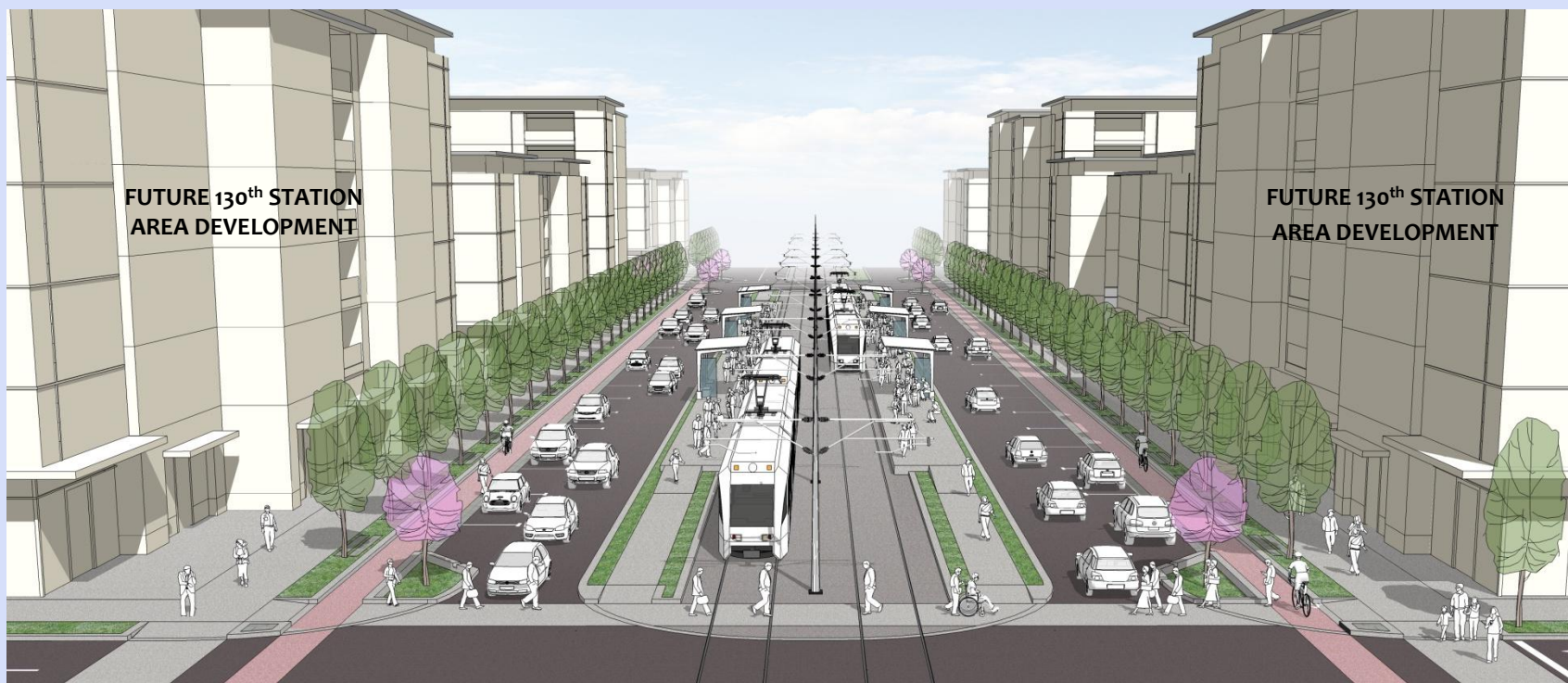
2-Lane, Buffered Protected Bike Lanes (Buffered), Including Parking
165' Cross Section

53' LRT Station Platform and Track
13' Inside Lanes
12' Turn Lane
2' Median Planter/Curb
7.5' Protected Bike Path
12' Sidewalks

10' Parking
1' Curb & Gutter
5' Planter Buffers

Zone 4 – 130th Ave NE looking east along 16th

Perspective Looking East



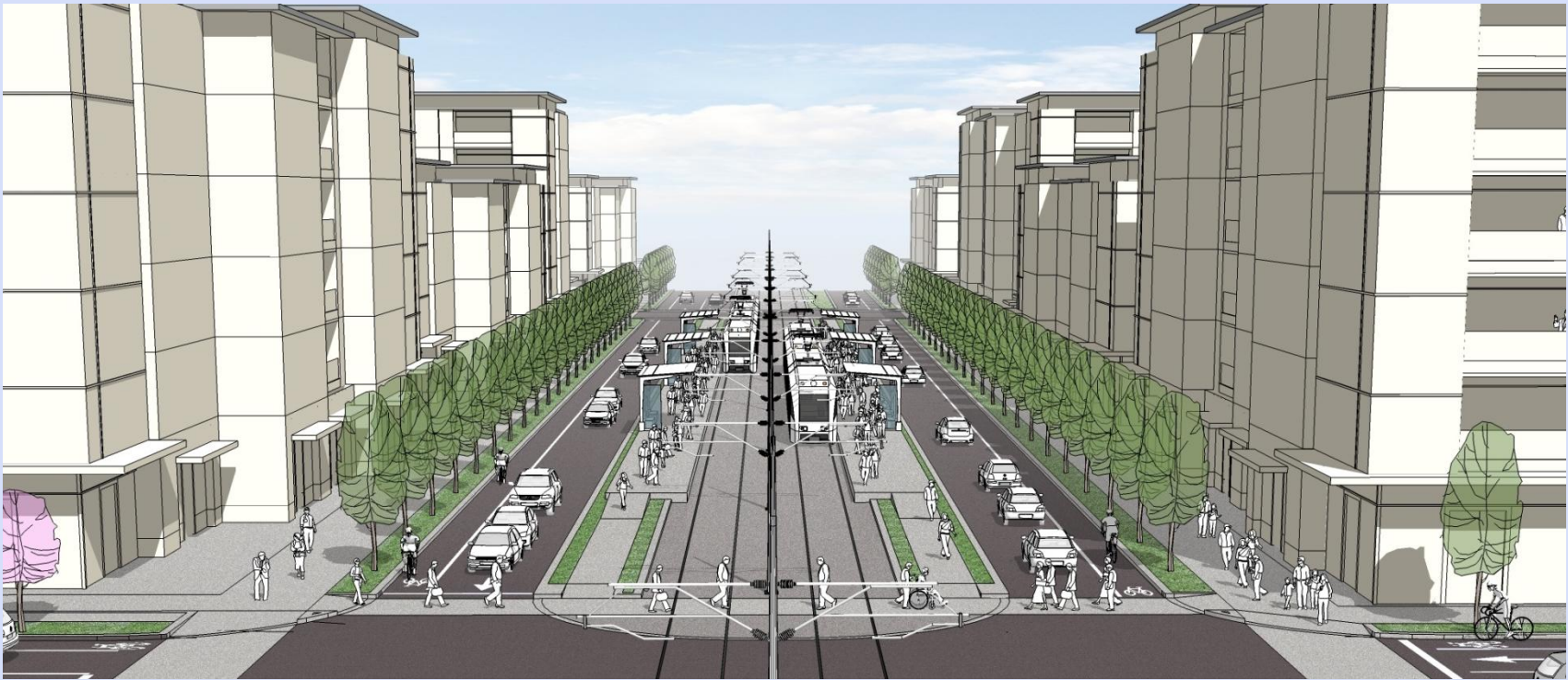
2-Lane Protected Bike Lane, Including Parking 157' Cross Section

53' LRT Station Platform and Track
 13' Inside Lanes
 12' Turn Lane
 2' Median Planter/Curb
 7.5' Protected Bike Path
 12' Sidewalks

10' Parking
 1' Curb & Gutter
 5' Planter Buffer

Zone 4 – 130th Ave NE looking east along 16th

Perspective Looking East



2-Lane, Bike Lane, No Parking
134' Cross Section

53' LRT Station Platform and Track
13' Inside Lanes
12' Turn Lane
2' Median Planter/Curb
5' Bike Lane
12' Sidewalks

1' Curb & Gutter
5' Planter Buffer

Zone 4 – Summary:

Two travel lanes

- Addresses capacity, access, and circulation

Variables:

	<u>Shown</u>	<u>Delete</u> <u>Parking</u>
Multi-Purpose Path	155'	148' ¹
Buffer/Protected Zone	165'	139' ¹
Protected Zone	156'	151' ¹
Bike Lanes		134' ¹

Tradeoffs:

- On-Street Parking – off-peak, permanent, limit location or delete
- Bike facility –access along corridor, to/from development and LRT station, and other streets or open-space
- Place making opportunities and integration with LRT/Development
- ¹Fire Department minimum requirement – 20'
- Width of corridor
- Cost of improvement

Conceptual level cost estimates:

Segment 1 (Zones 1 & 2)

PW-R-163, Mobility & Infrastructure Project

116th Ave NE to 124th Ave NE – LRT in separate alignment

Segment 2 (Zones 3, 4, & 5)

124th Ave NE to 136th/NE 20th – LRT center running & at-grade

Estimates based on Comprehensive Plan Option:

Segments	Engineering	Right-of-Way	Construction
116 th Ave – 124 th Ave	\$6.9 – \$7.9 million	\$38.9 - \$53.7 million	\$21.2 - \$30.3 million
124 th Ave – 136 th Pl/ NE 20 th St	\$8.6 – \$12.6 million	\$107.2 – \$113.8 million	\$32.4 – \$47.9 million

‘09 \$

Conceptual level estimates for Zone 2 (120th – 124th):

Zone 2	Engineering	Right-of-Way	Construction
Roadway – 4 lanes/turn lanes	\$1.2 - \$1.4 million	\$6.5 - \$8.2 million	\$4.9 - \$5.6 million
Multi-Purpose Path	\$29K	\$1.2 – \$1.8 million	\$90K - \$110K
Bike Lanes	\$29K	\$1.4 - \$1.9 million	\$90K - \$110K
Protected Lanes	\$42K	\$1.5 - \$2.0 million	\$130K - \$160K
Median	\$24K	\$1.1 – \$1.6 million	\$70K - \$90K
On-Street Parking	\$60K	\$0.9 - \$1.7 million	\$200K - \$230K
Sidewalk/Landscaping	\$138K	\$3.2 - \$5.3 million	\$330K - \$530K

Conceptual level estimates for Zone 4 (130th - 136th PI):

Zone 4	Engineering	Right-of-Way	Construction
Roadway – 4 lanes/turn lanes,	\$2.2 – \$2.6 million	\$17.3 - \$21.8 million	\$9.6 - \$11.6 million
Roadway – 2 lanes/turn lanes,	\$2.0 – \$2.4 million	\$10.2 - \$12.8 million	\$7.7 - \$9.3 million
Multi-Purpose Path	\$46K	\$1.9 - \$2.8 million	\$160K - \$180K
Bike Lanes	\$46K	\$2.2 - \$3.0 million	\$160K - \$180K
Protected Lanes	\$72K	\$2.4 - \$3.2 million	\$240K - \$280K
Median	N/A	N/A	N/A
On-Street Parking	\$60K	\$1.4 - \$2.7 million	\$200K - \$230K
Sidewalk/Landscaping	\$250K	\$5.0 - \$8.3 million	\$580K - \$930K

‘09 \$

Next Steps:

Open House – November 9



Address refinements
Respond to questions
Refine perspectives and cost estimates

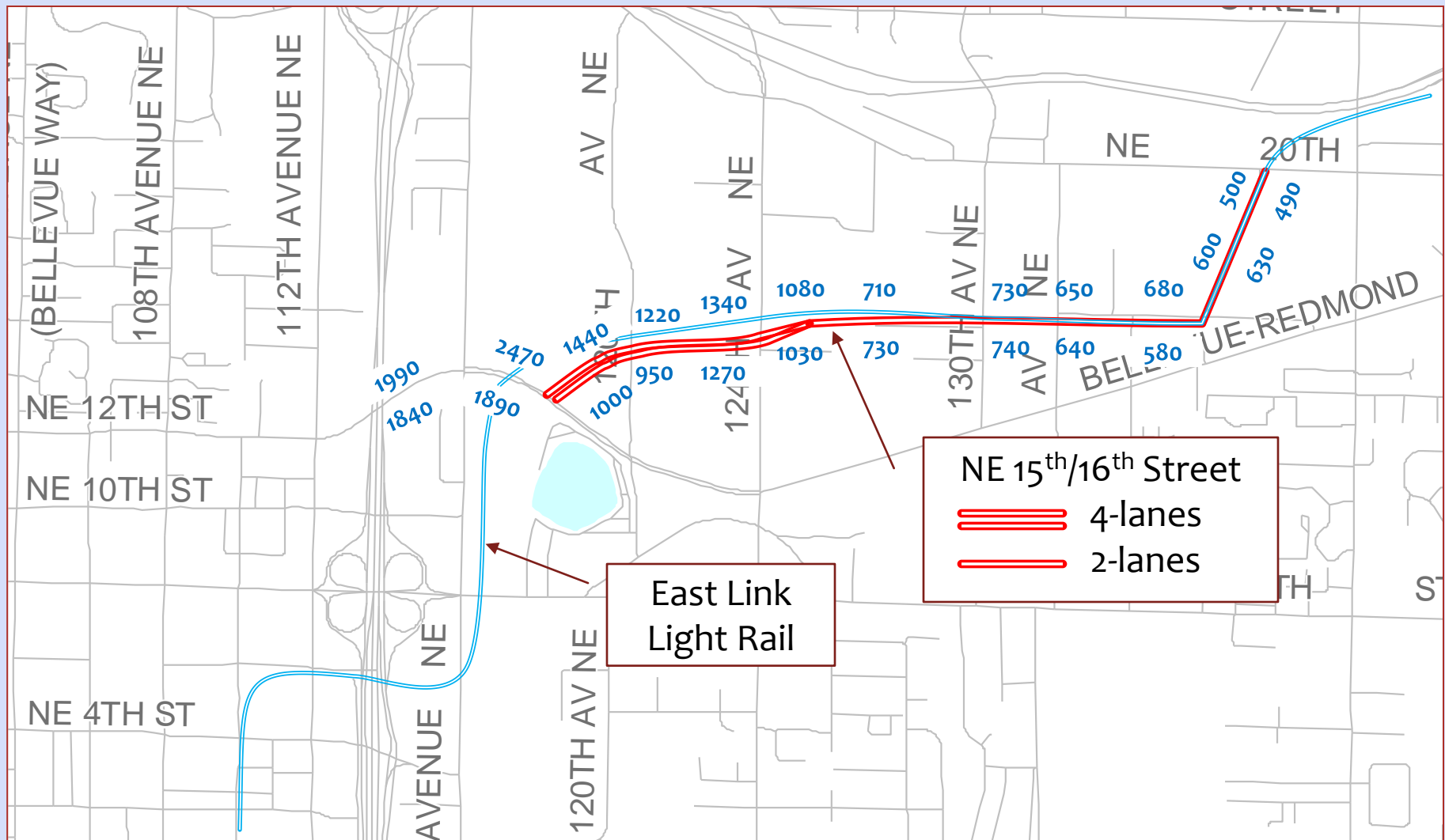


Council Direction – first Quarter 2011



Stormwater Management design
Development of Right-of-Way Plan
Pre-Design west of 124th
Update/Refine Cost Estimates – Preferred Master Plan
Potential CPA based on direction

Questions:



NE 15th/16th Street - Option 2*

2030 PM Peak Hour Traffic Volume

*2 lanes each direction NE 12th St to 124th Ave NE, 1 lane each direction east of 124th Ave NE

This image updated 10/25/10

Cross Sections: Bellevue Way and NE 8th Street

